

FINAL REPORT



TOWARDS SUSTAINABLE AGRICULTURAL COMMODITIES IN PAPUA NEW GUINEA – THE CASE OF PALM OIL, COFFEE & COCOA



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June 2016

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ACKNOWLEDGEMENTS

This study was made possible by the generous support of the World Bank's Forest Carbon Partnership Facility's (FCPF) REDD+ Readiness project implemented by the United Nations Development Program (UNDP) Papua New Guinea's Mission. FCPF is working in collaboration with the Climate Change and Development Authority (CCDA) as the Government of PNG's coordinating agency for REDD+, with technical support from the PNG Forest Authority (PNGFA) as the responsible party to conduct studies that will lead to the development of the national REDD+ strategy for the country.

FCPF Project Management Unit (PMU) staff under the leadership of the Chief Technical Advisor Mirzohaybar Isoev and Project Manager Peter Katapa provided invaluable guidance in planning and executing the study. Joel Scriven, REDD+ Regional Technical Specialist in Bangkok, Andrew Bovarnick from the UNDP Green Commodities Programme, Philip Cowling and Gae Gowae consultants to the FCPF PMU provided expert opinions on the report and guidance for the entire work. The authors of the report would also like to thank Doe Kwarara, Sam Moko and Mairi Feeger from the FCPF PMU for providing additional support and insights.

Many stakeholders and individuals contributed vital information and data to help us compile this report. Please see Appendix 1 for the full list of people interviewed during the study. We would especially like to thank Joe Pokana, the Acting Managing Director of CCDA and Goodwill Amos the Acting Managing Director of PNGFA for providing their support on conducting this study. We were also pleased to have the Secretary for the Department of Agriculture and Livestock (DAL) to attend the validation workshop and share his invaluable insight on the agricultural sector. We believe this is just the beginning of a fruitful collaboration between important government line agencies to address climate change, REDD+ and sustainable development in the country.

We are grateful to many Government Departments and Statutory Bodies who participated in this multi-stakeholder consultation. We acknowledge the involvement of Ruth Turia, Darius Kalulu, Gewa Gamoga from PNGFA, Terence Barambi from CCDA, Kwaipo Vali of the Department of Prime Minister and National Executive Council (DPM & NEC), Stephen Mombi and Stephen Mesa from DAL, Linus Billy, Gibson Pitz and Robin Lume from the Department of Lands and Physical Planning (DLPP), Eric Kwa from the Constitutional Review Committee (CLRC), Floyd Lala, Karen Hiawalyer and Jeremiah Paua of the Department of National Planning and Monitoring (DNPM), Joe Katape of Conservation and Environment Protection Authority (CEPA) and Mari Kila from the Department of Finance.

Discussions with Allan Oliver of the World Bank, Carlos Batanglini of the European Union, Roy Banka and Abe Hitofumi of the Food and Agriculture Organisation (FAO), Emily Flowers of the Australian Center for International Agriculture Research (ACIAR) and Tatsuya Watanabe of the Japanese International Cooperation Agency (JICA) provided the authors with useful knowledge on the agricultural sector of PNG.

We also acknowledge contributions from Raymond Unasi and Brian Manny of the Coffee Industry Cooperation (CIC); Jethro Apinas, Clement Victor, Potaisa Hombunnaka, Martin Powel of the Productive Partnership in Agriculture Project (PPAP), Author Mutinga of the PNG Cocoa Board, Leslie Wungen and Tobias Wambu of the Oil Palm Industry Corporation (OPIC), Orijit Majumbdes of Coffee Connection and Sammy Waru, Alma Lance and Elijah Kaove of Monpi Coffee.

From the private sector we welcome the support of Ian Orrell and Peter Callister of New Britain Palm Oil Limited (NBPOL), Bernard Lolot and Michael Paisparea from Tzen Nuigini, Graham McNally of Agmark and Bob Tate from PNG Forest Industries Association.

David Kura, David Tuki and Malcom Bai representing the palm oil growers association, Senson Mark from the Eco-Forestry Forum(EEF) and Peter Dam from FORCERT provided valuable comments from the growers and civil society perspective.

Finally we want to thank the different participants of the validation workshop conducted in Port Moresby on 31 May 2016 (see Appendix 5). We believe their contributions to develop a palm oil policy and a multi-stakeholder platform for palm oil will address many of the challenges currently faced by the palm oil sector in PNG.

ACRONYMS

AAA	Agriculture Administration Adjustment Bill
ACIAR	Australian Center for Agriculture Research
AIC	Agriculture Investment Corporation Bill
BSR	Business for Social Responsibility
CB	Cocoa Board
CEO	Chief Executive Officer
CCDA	Climate Change Development Authority
CCI	Cocoa Coconut Institute
CEPA	Conservation and Environment Protection Authority
CELCOR	Centre for Environmental Law and Community Rights
CGF	Consumer Goods Forum
CIC	Coffee Industry Corporation
CISD	Corporate & Industry Services Division (Cocoa Board)
COI	Commission of Inquiry
CPB	Cocoa Pod Borer
CPO	Crude Palm Oil
CSPO	RSPO-Certified Sustainable Palm Oil
DAL	Department of Agriculture and Livestock
DEC	Department of Environment and Conservation
DLPP	Department of Lands and Physical Planning
DNPM	Department of National Planning & Monitoring
DSP	Development Strategic Plan 2010-2030
EFF	Eco-Forestry Forum
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FCPF	Forest Carbon Partnership Facility
FER	Functional and Expenditure Review
FFB	Fresh Fruit Bunch
FLEGT	Forest Law Enforcement, Governance and Trade
FOD	Field Operation Division (Cocoa Board)
FPIC	Free and Prior Informed Consent
FREL	Forest Reference Emission Level
FRL	Forest Reference Level
GCP	Green Commodities Program
GEF	Global Environment Facility
GDP	Gross Domestic Product
GoPNG	Government of Papua New Guinea
HCV	High Conservation Value
HCS	High Carbon Stock
HOPL	Hargy Oil Palms Limited
InPOP	Indonesia Palm Oil Platform
JICA	Japan International Cooperation Agency
KIK	Kokonas Industri Koporesen
LEAF	Low Emissions in Asia's Forests
LLG	Local Level Government
LSS	Land Settlement Scheme
MRV	Measurement, reporting and verification
MTDP	Medium Term Development Plan
NADP	National Agriculture Development Plan
NBPOL	New Britain Palm Oil Limited
NEC	National Executive Council
NFMS	National Forest Monitoring System

NGO	Non Governmental Organization
NIWG	National Interpretation Working Group (RSPO)
OCCD	Office of Climate Change and Development
OPIC	Oil Palm Industry Corporation
OPRA	Oil Palm Research Association
PAM	Policy and Measures
PNGFA	Papua New Guinea Forest Authority
PNG	Papua New Guinea
PNGFIA	Papua New Guinea Forest Industries Association
PPAP	Productive Partnership in Agriculture Project
REDD+	Reducing Emissions from Deforestation and forest Degradation and enhancement of forest carbon stocks
RSPO	Roundtable on Sustainable Palm Oil
SABL	Special Agriculture and Business Lease
SGS	Société Générale de Surveillance
STARS	National Strategy for Responsible Sustainable Development
TFA	Tropical Forest Alliance
TWG	Technical Working Group
UNDP	United Nations Development Program
UNEP	United Nations Environment Program
UNFCCC	United Nations Framework Convention on Climate Change
UN-REDD	United Nations collaborative initiative on REDD
USAID	United States Agency for International Development
VOP	Village Oil Palm
VSS	Voluntary Sustainability Standards
WB	World Bank
WCS	Wildlife Conservation Society

EXECUTIVE SUMMARY

Papua New Guinea (PNG) has one of the most significant areas of tropical forest in the world. These forests are, however, under threat from commercial logging, clearing of land for agricultural commodities, mining or the expansion of small-scale agriculture to meet the livelihood needs of the country's largely rural population.

This study, commissioned by the Forest Carbon Partnership Facility (FCPF) REDD+ Readiness project, focuses on **assessing the business case for enacting a set of policies and measures to reduce the future impact of key agricultural commodities on forest cover in Papua New Guinea, while allowing for ongoing growth within these sectors.**

It finds that while PNG has ambitious plans to increase agriculture production through a combination of increased productivity (by 60%) and increase land under cultivation (by 180%) the balance of these approaches vary by commodity. Developments within the cocoa and coffee sectors are focused on improvements in productivity while **the palm oil sector is focused on increasing production through expansion of the area under cultivation and represents the most significant threat to levels of forest cover.** Indeed, the area under cultivation estimated at 150,000 ha is already set to more than double in the short term based on expansion of existing projects and increase by 10-fold to 1.5 million ha by 2030 according to government plans.

This expansion is not in line with the same internationally recognized sustainability standards currently applied by palm oil producers within the country. and presents a potential reputational risk to the entire PNG palm oil sector. The global industry is under significant public scrutiny and is moving increasingly towards internationally recognized standards as a norm. Indeed **companies responsible for 90% of global palm oil trade have committed to zero net deforestation within their supply chains by 2020.** The Netherlands, UK and Germany, the largest purchasers of palm oil products from PNG have also recently signed the Amsterdam Declaration to ensure that by 2020, 100% of palm oil entering their countries is from sustainable sources.

To reduce the risk to forests, ensure the profitability of the sector and its long-term sustainability it is recommended that PNG position itself as a global leader for sustainable palm oil production. This is fully aligned with government long-term strategy expressed in STaRS and its associated Green Growth Framework and could provide strong benefits for PNG's people, economy and the environment. This will also facilitate access to REDD+ financing.

Two key recommendations are proposed in this context:

- A **National Policy For Sustainable Palm Oil** is developed and supported by mapping of appropriate areas for expansion and off limits areas to help guide future expansion.
- A **Multi-stakeholder Palm Oil Platform** is established to strengthen coordination in the sector and help to both develop and oversee policy implementation.

Report Content

After an overview of the agricultural sector of PNG, the report presents the baseline situation of agricultural commodity production for the palm oil, coffee and cocoa sectors. Information is provided on scale of production, contribution to economic growth and poverty reduction, key challenges and opportunities and the potential for expansion of each commodity. It then introduces the international and domestic environment for voluntary standards certification, one of the most commonly used tools to improve the environmental, social and economic performance of commodity supply chains. The business case for sustainable agricultural commodities is made by presenting how the agricultural sector, and palm oil in particular, is facing unprecedented scrutiny regarding how its business practices impact the environment and the wider world. The report concludes with a number of recommendations to inform the drafting of the future national REDD+ strategy.

Overview of the Agricultural Sector

The agricultural sector is central to economic growth and poverty reduction. The sector has contributed between 25 to 40% GDP over the past 40 years and around 85% of the population are dependent on agriculture for their livelihoods. Despite this central role levels of productivity are relatively low by international and regional standards and **the government is targeting improvements in agricultural productivity (by 60%) and expansion of area under cultivation (by 180%)¹**. Expansion plans for palm oil, coffee and cocoa are a key parts of this and the government's long-term strategy to develop a “world-class agricultural sector that is responsive to international and domestic markets for a diverse range of products and provides the best available income and job opportunities” by 2030.

The government capacity and coordination to support the sector is limited with a lack of coordination between government departments, a lack of dialogue and transparency between the different actors engaged in agricultural commodities, low capacity in government departments to enforce existing legislation and an agriculture budget representing less than 2% of public spending.

However, there is an emerging policy direction for a stronger and more sustainable agricultural sector. The recent Functional and Expenditure Review of Commodity Boards and Agencies within the agricultural sector identified a number of areas for improvement. The review has led to the development of two new bills with far reaching implications for the development of the sector. The *Agriculture Administration Adjustment (AAA) Bill* redefines the role of the Department of Agriculture and Livestock (DAL), all commodity boards and agencies, provincial agencies and the manner in which they interact with each other. The *Agriculture Investment Corporation (AIC) Bill* provides for the establishment and management of the Agriculture Investment Corporation and details how to secure funding and manage investments in the agriculture sector. Implementation of these bills, however, will require significant strengthening of dialogue, coordination and trust between institutions and stakeholders in a sector that is currently highly fragmented.

STaRS, the National Strategy for Responsible Sustainable Development and its associated Green Growth Framework provides the overarching framework to guide these discussions and what can be done to reduce the future impact of agricultural commodities on forest cover in PNG. **STaRS is the road map for mainstreaming sustainable development into development policy and actions, and establish PNG as a global leader in promoting a responsible sustainable development paradigm.** Realizing this paradigm shift will require significant national commitment as well as ongoing support from development partners.

¹ GoPNG 2010B

Palm Oil

The Palm oil sector, the country's biggest agricultural export at close to Kina 1 Billion per annum, is expected to have the largest impact on forest cover in the short to medium term. Expansion is already occurring in multiple provinces including East New Britain, New Ireland, Western Sepik and Eastern Sepik with an estimated 200,000ha under development above and beyond the existing 150,000 ha established by New Britain Palm Oil Limited (NBPOL) and Hargy Oil Palm (HOPL) Limited and new mills gradually entering into operations. **New developments are operating under Special Agriculture and Business Leases (SABLs) and pose a significant reputational risk for PNG's palm oil industry.**

Palm Oil Summary Facts

- PNG's largest agricultural export with over Kina 1 billion exported in 2014
- Established plantations and smallholder plots cover approximately 150,000ha
- The main producer (NBPOL) represents 87% of national production and employed around 23,000 people in 2014.
- Main established producers (NBPOL and HOPL) certified by the Roundtable on Sustainable Palm Oil (RSPO) attracting an international price premium.
- 200,000 ha of new planting estimated to be under development in East New Britain, New Ireland, Western and Eastern Sepik as part of SABLs.
- Area of land available for certified expansion limited and not fully mapped
- The government is targeting a ten-fold increase in production area in the next 15 years
- There is no existing national policy for palm oil making rapid expansion vulnerable to high environmental and social impacts.
- Demand for internationally recognised certification standard is increasing rapidly at the global level
- Development of uncertified production in PNG presents a reputation risk to the "PNG Palm Oil" brand.

Interviews with the Oil Palm Industry Corporation (OPIC) indicated that **in accordance with government long-term strategy they aim to develop 1 million ha of palm oil** in the future and are identifying areas to do so (the key bottleneck for such expansion being financing). The lack of a national policy for palm oil, the opacity of SABLs arrangements and different views on the potential development are, however, limiting planning and oversight of new developments, significantly increasing the risks of deforestation and associated damage to the international reputation of the sector in PNG.

PNG's palm oil producers have competed internationally in the past by marketing quality over quantity, specifically through attaining certification of production with the Roundtable on Sustainable Palm Oil (RSPO). The country currently has the highest percentage of sustainably produced palm oil, 93% in 2014 and has the 3rd largest area of certified plantations.

With the arrival of new investors operating under SABLs, PNG have now two different types of palm oil production (i) one grown under the certification process of RSPO or other standards, which the European Market increasingly demands, (ii) one grown outside of certification schemes with new investors likely to sell to the Chinese or Indian markets in the short to medium term. **The large scale development of uncertified palm oil could significantly impact on existing certified producers as well as the long-term profitability of the sector as investors seek to follow global market trends towards sustainable production for high value European and US markets.**

A national policy for palm oil with sustainability requirements/ code of practice at production level for new investors is urgently needed if PNG wants to maintain its reputation and maintain access to western markets.

Cocoa/Coffee

The coffee and cocoa sector represent the 2nd and 3rd most significant agriculture crops in terms of their economic importance to PNG. They have industry strategic plans in place, developed by their commodity board, that detail the future direction of the sector. Contrary to palm oil, coffee and cocoa expansion plans are mostly focused on increasing productivity and the rehabilitation of existing blocks/plantations. The risk of deforestation exists in the so-called lowlands 'new growth areas' but appear to be limited in the absence of large-scale investments in the sector.

Coffee and Cocoa Summary Facts

- Coffee and cocoa export over Kina 650 million per year
- Targets for increased production focus on improvements in productivity of existing producing areas and rehabilitation of existing blocks/plantations
- Significant sectoral support provided by the Productive Partnerships in Agriculture Project
- Potential exists to increase certification above existing levels (currently approximately 10%)

These sectors are also supported by the largest ongoing development program in the agriculture sector, the Productive Partnerships in Agriculture Project (PPAP) funded by a World Bank loan, which aims to improve the livelihoods of 60,000 coffee and cocoa farmers and their families. With funding above 100 million USD and implementation running up to 2019, the programme is focused on increasing productivity within existing plantations through strengthening extension services, addressing pests and disease and supporting replanting of ageing plantations.

The potential for coffee/cocoa certification in PNG is much higher than its current level of production, currently below 10% for each commodity. Certification, while recognised by many stakeholders as key to maintaining PNG's competitiveness in the future, is not appropriately reflected in government implementation or existing commodity support development projects. While STARS mentions the certification of sustainable production and trade as key green growth policy instruments, it has not yet been translated into the Medium Term Development Planning. Similarly, The PPAP does not have a specific focus on certification despite its level of funding and relevance for the country. A number of voluntary standards are already operating in the country (e.g. Fairtrade International, Organic, Rainforest Alliance/SAN, Utz Certified, 4C association) and have shown relative successes.

Further expansion of certification at this stage in sector development would help to maintain high environmental and sustainability standards and improve access of PNG products to premium markets. Support would be needed in addressing some of the key challenges of certification such as the high cost of auditing, the lack of capacity of smallholders or extension services to deal with certification, the lack of effective producer organisation, poor market access infrastructure or an inappropriate policy environment.

The Business Case for Sustainable Agricultural Commodities

The agricultural sector, and palm oil in particular, is facing unprecedented scrutiny from governments, regulators, NGOs, investors, and consumers within developed countries regarding how its practices impact the environment and the wider world. **Political and corporate momentum towards sustainability standards as a norm is accelerating.** Some of the largest companies have recently adopted stringent sustainability targets and sourcing policies, to ensure that palm oil is traceable, sustainable and deforestation free. Companies with an estimated turnover of 2.8 trillion USD have pledged to zero net deforestation through their supply chains by 2020.

Business Case Summary Facts – Towards Zero-Deforestation Palm Oil

- The Consumer Goods Forum (a global consortium of over 400 companies with a turnover of 2.5 trillion USD) have pledged to zero-net deforestation through their supply chain by 2020
- Companies that account for 90% of global trade in palm oil have committed to no deforestation in their supply chain policies (e.g. Unilever, Nestle, Wilmar, etc.)
- The Amsterdam Declaration was recently signed by 5 governments in the EU (Denmark, France, Germany, Netherlands, UK) to ensure that by 2020, 100% palm oil entering their countries is from sustainable sources.
- The Netherlands, UK and Germany are the largest purchasers of palm oil products from PNG

Business as usual is not longer an option for producers, companies or government wanting to remain competitive. Most likely, investors, buyers, traders, and ultimately China and India, will all converge around the concepts of sustainability and traceability.

PNG should position itself as a global leader for sustainable palm oil production. Such positioning could represent an important win-win scenario for the government as:

- It is fully aligned with its long-term strategy as formulated in STaRS and its associated Green Growth Framework
- It is fully aligned with the corporate and political momentum for traceable, sustainable and deforestation-free palm oil
- It will help remain competitive, maintain access to premium markets and secure foreign exchange
- It will support poverty reduction and safeguards social interests, communities and workers
- It will help protect the environment, reduce forest loss and associated emissions
- It will also facilitate access to REDD+ financing.

Recommendations – How to Move Towards Sustainability

Considering that: (i) the palm oil sector is likely to have the most impact on forest cover in the short to medium term due to its unregulated expansion, (ii) the palm oil sector is the primary source of agricultural export revenue in the country (iii) the coffee and cocoa sectors currently present a lower risk on forest cover and are supported by a large USD 100 million multi-donor national program; **it is proposed that the future REDD+ strategy should focus its efforts on the palm oil sector** in terms of addressing commercial agriculture as a key driver of deforestation and forest degradation.

For the coffee and cocoa sectors it will be important for the PPAP and the Cocoa and Coffee Commodity Boards to significantly strengthen their activities aimed at increasing the share of certified sustainable cocoa and coffee before the end of the project in 2019. This will help reduce the potential impact on forest cover, maximise benefits for local communities and better position PNG in terms of differentiated markets. REDD+ should also closely monitor the development of large-scale investments, if any, in the short to medium term, as well as so-called 'new growth areas'.

For palm oil specifically, two key recommendations are proposed based on the key findings from the study, the specificities of the local context, the policies and measures already in place and international best practices.

1. Developing a national policy for sustainable palm oil.

Developing a policy that delivers systemic solutions to the root causes of unsustainable palm oil production in PNG is of paramount importance to reducing the risk of deforestation associated with current palm oil expansion. Accordingly, it is proposed to contract as soon as possible a team of experts to prepare the groundwork for the development of such policy. The aim of this preparation study would be twofold. Firstly, to fill the information gaps identified in this report and secondly to prepare a detailed list of policy options to be considered through rigorous multi-stakeholder consultation processes.

(i) Addressing Information Gaps

Building on the data provided in this report, further research is required to conduct:

- a comprehensive mapping of all the existing palm oil development in the country with data such as location, size, employment/investment generated, viability, international market linkages, funding, customary landowners arrangements, etc.
- an independent mapping of palm oil land suitability and identification of areas suitable for expansion that could also comply with the environmental and social certification criteria (e.g. Free and Prior Informed Consent, Protection of High Conservation Value forest, etc.)
- a cost/benefit analysis comparing the current model of uncontrolled expansion versus a model of regulation of new operators over the next 20-30 years, to include costs associated with environmental degradation from forest clearance or negative social impact and potential benefits from palm oil development such as infrastructure investments or increased employment opportunities.

(ii) Developing Policy Options:

Once the information gaps are filled, the preparation study should detail the best route possible to reduce the future impact of palm oil on forest cover in PNG. Initial analysis from this assessment already indicates different options to consider:

- *All future palm oil operators should follow existing sustainability standards* such as RSPO, Rainforest alliance/SAN, or even RSPO next (with stricter requirements in terms of deforestation, peat, etc.). Therefore, making certification of palm oil operations, mandatory in PNG and preventing the entry of non-certified low cost producers in the country. In such a scenario, the status of ongoing palm oil development that can not be certified will have to be adequately addressed.
- *PNG defines its own sustainability standard* as done by Malaysia (MSPO) and Indonesia (ISPO). This is not recommended as it will require significant efforts and considerable time which might not be completely justified with PNG's current level of production, potential for certification expansion, and existing capacity.
- *Pilot RSPO's jurisdictional approach under which arrangement the entire province would have to comply with the requirements set by the RSPO.*

Based on the additional data collected by the proposed study, these options should be expanded and refined. Other policy options should also be considered through rigorous stakeholder consultations including:

- Development of an improved regulatory framework and enforcement mechanisms ;
- Identification of the best strategies to resolve the SABL issue ;
- Identification and establishment of Public-Private Partnerships ;
- Identification and implementation of necessary capacity building programs to mainstream sustainability in the sector ;
- Development of appropriate economic and policy incentives ;
- Any other activities deemed necessary to ensure the long-term sustainability of the palm oil sector in PNG.

2. Establishing PNG's first multi-stakeholder palm oil platform (PNGPoP)

The platform, building on the model and experience of the Indonesia Palm Oil Platform (InPOP) established by the UNDP Green Commodity Program, is expected to directly address some of the key challenges faced by the sector in PNG by increasing dialogue, transparency, ownership and coordination of the sector.

The objectives of the platform would be to:

- Create a multi-stakeholder national action plan for the long-term sustainability of palm oil;
- Monitor and adapt actions that address the root causes limiting the sustainability of the PNG palm oil sector;
- Influence and harmonise government policy that ensures a strong and coherent legal framework for the sustainability of PNG palm oil;
- Establish partnerships and coordinate existing actions that forward the sustainability of PNG's palm oil.

Platform participants should include government leadership at ministerial level; representatives of the office of the Prime Minister, CEPA, DAL, DNPM, PNGFA, DLPP, CCDA, OPIC, provincial departments, smallholders/customary landowners, private sector (e.g. existing and new operators, manufacturers, retailers), civil society, global partners, UN agencies as appropriate, donors and financial institutions.

This platform will provide the government of PNG with an important opportunity to translate the STaRS long term strategy into practice, build a new image for the sector, and position the country as a global leader for sustainable palm oil. Ultimately, it will enable collective agreement on sustainable and systemic solutions for the production of palm oil that is respectful for the environment, expands social benefits and improves PNG's market competitiveness for its first agricultural export revenue.

1. INTRODUCTION

1.1 Terms of Reference

Papua New Guinea (PNG) has one of the most significant areas of largely-intact tropical forest in the world, although these forests appear to be facing acute and imminent threats. Forests are also a vital resource for the local population particularly in the remote rural areas of PNG, providing food, fibre, building materials, and support a variety of wildlife and ecosystem services. The Papua New Guinea Forest Authority (PNGFA) estimates that approximately 60% of the total area of the country is covered by natural forests, of which 52% are considered production forests (for timber and other products), and 48% are for conservation (not for timber extraction due to inaccessibility or ecological constraints).

A mechanism for Reduced Emissions from Deforestation and Degradation (REDD+) being developed through the United Nations Framework Convention on Climate Change (UNFCCC) provides an opportunity to support PNG's efforts to reduce levels of deforestation and help to maintain and protect its natural forest. PNG has been a leading proponent of REDD+ at the international level, and has made significant progress towards developing the capacity to engage in an international mechanism on REDD+. This progress has initially been supported by the UN-REDD Programme and is now being aided by the Forest Carbon Partnership Facility (FCPF) through a project that will run until the end of 2018. As part of the REDD+ readiness development process the country must consider a number of approaches to addressing the drivers of deforestation and forest degradation and strengthening land use management. Previous analyses of deforestation and forest degradation have highlighted the role of agriculture as a key driver. Deforestation has occurred through the conversion of degraded forest land into commercial plantations or smallholder farming plots (many also containing cash crops). For example, subsistence agriculture is estimated to have resulted in over 3,6 million hectares of deforestation over the 30 years prior to 2002 (Shearman, 2008).

Increasing global demand for agricultural commodities, palm oil in particular, has seen this deforestation rate rise, with over 4 million hectares of forest land cleared under Special Agriculture and Business Lease (SABL) agreements between 2003 and 2010. Such rapid increases in forest clearance for agriculture are also likely to continue in a country with population growth of over 2%, increasing global demand for agricultural commodities and only 4% of land area currently dedicated to agriculture when an estimated 30% is considered suitable for agriculture. Agriculture is a mainstay of the PNG economy and thus represents an important area for economic growth and stability. As such there is a need to ensure that continued agricultural development not only supports economic growth and poverty alleviation, but is also socially and environmentally sustainable. This is particularly important if the country is to meet its objectives under the Vision 2050 development strategy, including that of becoming carbon neutral by 2050.

The current assignment is focused on assessing the potential for increasing the sustainability of agricultural expansion of a number of key commodities: oil palm, cocoa and coffee. The objective of the assignment is to *assess the business case for, and feasibility of, enacting a set of policies and measures to reduce the future impact of key agricultural commodities on forest cover in PNG, while allowing for ongoing growth within these sectors*. In undertaking this assignment the international consultant (working closely with a national consultant, the FCPF team, government counterparts, private sector stakeholders and NGOs) focused on the oil palm sector but also gave due consideration to the cocoa and coffee sectors in answering the following questions:

What is the baseline situation of agricultural commodity production in PNG (for palm oil,

coffee and cocoa)?

- What is the scale of production, what have been the impacts of their expansion on forests?
- What is their contribution to the national economy and national government tax receipts?
- What is their contribution to rural livelihoods and what is the role of local smallholders within each sector?
- What is their potential for expansion (in terms of land area, revenue, tax receipts and required forest clearance, require capacity building and strengthening of value chains)?
- What government agencies and other stakeholders are involved in key agricultural commodity development in PNG?
- What is the baseline situation of sustainable commodity certification and how is this is expected to change in the future?
- To what extent have national and provincial development strategies taken into account commercial agricultural commodity development and, if applicable, how?

What policy options are available to government to further support expansion within key agricultural commodities while also supporting environmental sustainability and reducing impacts on forest cover?

What are the key stakeholder groups (and individuals, if applicable) that would need to be engaged in and support agricultural commodity policy reforms and how?

- How could policies intended to support the environmental sustainability of key agricultural commodities also be designed to maximise benefits to rural communities?
- What is the role for land use planning and what needed to ensure land use and development plans optimize available land for expansion?
- What capacities are required, and what capacities exist among different stakeholders (particularly the plantation companies and traders), to implement such policies?
- What is the feasibility of enacting a national law for requiring sustainability certification and/or creating PNG-specific national standards for key commodities?
- What are the key challenges to enacting globally recognised certification standards?
- What is the feasibility of establishing a multi-sectoral dialogue mechanism for key commodities in PNG?
- What opportunities exist in international commodities markets for sourcing sustainable products from PNG?

1.2 Scope of the report

The Government of Papua New Guinea (GoPNG) is receiving international support from a number of bilateral and multilateral sources to prepare the country for implementing REDD+ under the UNFCCC.

Since REDD+ is a results-based compensation mechanism, the implementation of REDD+ requires beneficiary countries to have the necessary institutions, policies, information and capacities to meet the performance requirements. To be eligible to receive results-based finance for REDD+, PNG is expected to develop the following elements:

- A National Strategy or Action Plan;
- A National Forest Reference Emission Level (FREL) and/or Forest Reference Level (FEL) based on national circumstances;
- A robust and transparent National Forest Monitoring System (NFMS) for the monitoring and reporting of the REDD + activities;
- A system for providing information on how the safeguards on local community and

forest biodiversity are being addressed and respected throughout the implementation of the REDD+ activities while respecting sovereignty.

The UN-REDD Readiness Support program has been in operation since 2011 in PNG. The UNDP component of this joint program was completed in December 2015, and the FAO and UNEP components are running through to December 2016². To help maintain international support to PNG's efforts towards the implementation of REDD+ activities, the World Bank's Forest Carbon Partnership Facility's (FCPF) REDD+ Readiness project was initiated in 2015 and will run until the end of 2018. It is jointly implemented by the Climate Change and Development Authority (CCDA) as the Government of PNG's coordinating agency for REDD+, with technical support from the PNG Forest Authority (PNGFA) as the responsible party. UNDP is the responsible agency. The set of expected results from the project is presented below in Table 1.1. The FCPF REDD+ Readiness project is currently coordinating a number of studies with the target of having a national REDD+ strategy defined by the end of 2016. An issues and options paper is currently being developed through a consultative process as a precursor to PNG's National REDD+ Strategy that sets out the key existing REDD+ related information gaps, as well as recommendations on priority actions and strategic decisions to be taken by relevant stakeholders. An "*Analysis of National Circumstances in the context of REDD+ and identification of REDD+ abatement levers in Papua New Guinea*" was also recently completed by the Wildlife Conservation Society (WCS) (Cuthbert et al, 2015) under the UN-REDD programme. Other ongoing studies include a closer look at Social and Environmental Safeguards; Land Use Financial Flows and Economic Value Assessment; and Gender Participatory Approach and Stakeholder Engagement. It is also expected to develop a REDD+ website in PNG to increase public awareness and ensure transparency and accountability on REDD+ related initiatives.

Table 1.1: FCPF REDD+ Readiness Project logic model

<p>Goal: To contribute to the development of PNG's capacity to design a sound national REDD+ strategy, develop and sustain national readiness management arrangements, elaborate REDD+ strategy options, develop the REDD+ implementation framework, assess social and environmental impacts so that, by 2018, PNG is ready to implement policies and measures to reduce emissions from its forests and to enhance removals under the UNFCCC REDD+ mechanism.</p>
<p>Objective: To establish capacities for efficient management of REDD+ and the National REDD+ Strategy</p>
<p>Outcome 1: Capacities exist for effective and efficient management of REDD+, including full and effective participation of all relevant stakeholders</p> <p>Output 1.1: <i>National REDD+ management arrangements</i> Output 1.2: <i>Communications and information sharing systems</i> Output 1.3: <i>Stakeholder consultation and participation process</i></p>
<p>Outcome 2: The National REDD+ strategy</p> <p>Output 2.1: <i>Assessment of land-use, forest law, policy & governance</i> Output 2.2: <i>REDD+ strategy options</i> Output 2.3: <i>REDD+ implementation framework</i> Output 2.4: <i>Social & environmental impacts addressed, including grievance mechanism</i></p>

Source: UNDP, 2016

² The current UN-REDD component (FAO/UNEP) is focused on the NFMS and FREL/FRL parts. The European Union and JICA also provide support on forest inventory and NFMS

This assessment of sustainable agriculture commodities in PNG contributes directly to the REDD+ readiness development process by looking at potential approaches to address some of the key drivers of deforestation in the country. It is expected that the recommendations from this study will, after validation from key stakeholders, inform the issues and options paper currently being drafted and ultimately the future national REDD+ Strategy.

1.3 Approach and methodology

This draft assessment report is based on:

(i) **a review of the available literature for both the domestic and international environment** aimed at facilitating a better understanding of the key issues facing the country, who are the key stakeholders involved in the palm oil, coffee and cocoa sector, what are the existing best practices, what is the current global certification landscape and so on (the literature reviewed, and other relevant materials consulted, are listed in References);

(ii) **semi-structured interviews with key informants** (within and outside PNG). The long-term sustainability of a commodity requires nationwide multi-stakeholder commitment. This multi-stakeholder nature has been reflected in the consultation process and interviews were conducted with the following stakeholder groups: government agencies, civil society organisations, smallholder farmer organisations, donors and the private sector. Tailored questions were discussed with each stakeholder group based on their specific experience and in accordance with the Terms of Reference (i.e. Baseline situation for each commodity? Success stories? Existing national best practices? Key challenges to address? What are the opportunities? What are the key stakeholders that would need to be engaged? How to go beyond certification? Feasibility of establishing a multi-stakeholder dialogue mechanism? What are the capacities required?) The degree to which each stakeholder consulted has influence over the relevant commodity and their level of interest for potential future engagement was also assessed (the list of people interviewed during March/April 2016 is presented in Annex 1).

This draft report will be circulated to the different stakeholders consulted and a validation workshop will be conducted end of May 2016 to gather expert opinions on the proposed recommendations. The final report is expected to be delivered by Mid-June 2016. In addition to the report, a short policy brief summarising the findings of the assessment, key recommendations and next steps will be made available for use by key policy makers.

2. OVERVIEW OF THE AGRICULTURAL SECTOR

Key Findings

A. *The agricultural sector is central to economic growth and poverty reduction.*

- Agriculture has contributed between 25 to 40% GDP over the past 40 years and around 85% of the population are dependent on agriculture;
- Agricultural commodities (e.g. palm oil, coffee, cocoa, coconut) provide the key sources of agricultural export revenue and employment;
- The sector remains relatively underproductive and not a major force in the global commodities markets; Nonetheless, the government is making significant plans to boost investment in the sector in the years to come;
- Ambitious expansion plans for palm oil, coffee and cocoa are a key part of the government long-term strategy to develop by 2030 a “*world-class agricultural sector that is responsive to international and domestic markets for a diverse range of products and provides the best available income and job opportunities*”; Increase in agricultural production is expected to be derived from an 180% increase in the use of land by agriculture and from a 60% improvement in agricultural productivity.

B. *Government capacity and coordination to support the sector is limited*

- There is a lack of coordination between government departments when it comes to agricultural commodities (between DAL, Commodity Boards, CEPA, Lands department, Forestry, etc.). Each department operates in isolation rather than through multi-sectoral approaches, and overlapping roles exists;
- There is a lack of dialogue and transparency between the different actors engaged in agricultural commodities (private sector, civil society, landowners, government, etc.) and opposite views on what should be done for the future; as a result there is a lack of trust between the key actors.
- There is low capacity in government departments to work on enforcement of existing legislation (e.g. in CEPA). The necessary legal framework is in place. There are good intentions but these are not adequately enforced.
- Agriculture budget represents less than 2% of public spending.

C. *There is an emerging policy direction for a stronger and more sustainable agricultural sector*

- The sector recently underwent a Functional and Expenditure Review of Commodity Boards and Agencies. Two new bills are soon to be approved and enacted into laws with far reaching implications for the development of palm oil, coffee or cocoa and for any activities related to sustainable agricultural commodities in PNG;
- The Agriculture Administration Adjustment (AAA) Bill redefines the role of the DAL, all agriculture commodity boards and agencies, and provincial agencies and the manner in which they are intended to interact with each other;
- The Agriculture Investment Corporation (AIC) Bill provides for the establishment and management of the Agriculture Investment Corporation detailing how to secure funding and manage investments in the agriculture sector;
- STARS (the National Strategy for Responsible Sustainable Development) provides the overarching framework to discuss what can be done to reduce the future impact of key agricultural commodities on forest cover in PNG. However, STARS is not yet adequately translated into government medium-term planning;

2.1 Contribution to economic growth and poverty reduction

PNG has a small, export-oriented economy heavily reliant on commodity products; minerals constitute roughly 75% of total exports, agriculture (including fisheries) products 20%, and forestry products 5%. While overshadowed by energy and mining investments, PNG's agricultural sector is a key earner of foreign currency and a primary employer for many of its citizens. The DAL estimates that around 85% of the population are dependent on agriculture. The country's fertile land makes the sector the most viable option for absorbing its growing workforce, while continuing to provide potential for the economy in the long term (Oxford Business Group, 2015).

Agriculture is a major part of the economy. It is the most important activity carried out by the vast majority of Papua New Guineans. For most people, agriculture fills their lives, physically, culturally, economically, socially and nutritionally. Around 88% of the population lives in rural areas and primarily practices subsistence agriculture. Sweet potato, cassava, taro, bananas, pork, fowl and fish are the dietary staples. Seafood also represents a large part of the diet in the country's coastal regions. Cash income is provided by sales of Arabica coffee, fresh food, cocoa, betel nut, copra, oil palm, firewood, tobacco, fish and many minor products including vanilla, rubber, balsa and tea (Bourke et al, 2009).

Shipments of PNG's primary agriculture export crops totalled PGK1.51bn (\$571.4m) in 2013. The country's biggest agricultural export in kina terms has been palm oil, selling almost PGK1bn (\$378.4m) overseas in 2013. Coffee continues to hold second place in agriculture exports and cocoa the third place. Other agricultural export crops from PNG include tea, copra, coconut oil and rubber (see table 2.1).

Table 2.1. Agriculture exports 2005-2014 (PGK m)

Period	Cocoa	Coffee	Tea	Copra	Copra Oil	Palm Oil	Rubber
2005	198.7	471	20.2	17.3	93.7	391.4	18
2006	204.4	337	21.2	8.3	60.4	430.1	23.8
2007	276.5	408.4	20	10.3	121.9	672.2	22.9
2008	345.6	520.2	18.9	45.1	202.7	1011.9	32.6
2009	337.3	460.3	18.4	12.4	87.9	714.3	26
2010	347.6	521	18.4	21.9	130.2	1024.7	32.4
2011	320.3	927.4	14.2	70.8	173.9	1477.4	40.9
2012	182.6	478.5	11.7	33.1	56.1	1009.9	33.1
2013	206	336.7	10.4	13.2	24.5	903.5	19.4
2014	213.3	450.3	8.4	63.7	19.9	1086.4	13.8

Source: Oxford Business Group, 2015

While agriculture has held up well as a percentage of total GDP in the country, it remains relatively underproductive and not a major force in the global commodities markets.

Palm oil yields are below those in Malaysia, coffee yields are below those in Brazil and cocoa yields are below those in Indonesia. The agriculture sector will need to invest in productivity and logistics, as well as better manage its output, if it is to differentiate its products in international markets and get the most from the sale of commodities. (Oxford Business Group, 2015).

A number of key challenges are undermining its performance and potential impact on economic growth and poverty reduction:

- Pressure on land associated with rapid population growth;
- Poorly maintained transport infrastructure, particularly roads and bridges;
- Limited new technology being generated from research;
- Very limited effective outreach and agriculture extension capacity;
- Climate change as a significant long-term challenge, particularly rising sea levels, greater rainfall, increasing temperatures and possibly greater frequency of extreme climatic events;
- Insufficient attention given to marketing and promotion of PNG produce;
- Mismanagement of the national economy, poor performance of institutions involved in the governance and administration of agriculture, and poor policy making;
- Poor communication among growers, middlemen, processors and retailers in the production and marketing chain (Bourke et al, 2009)

Nonetheless, agriculture in PNG is on the upswing with the government making significant plans to boost investment in the sector in the years to come. Greater government funding for agricultural development is set to improve competitiveness, with growth projections of 3.6% in 2015. The 2015 budget is seeking foreign participation in the coffee, cocoa, palm oil, rubber and livestock industries. James Marape, PNG's Minister of Finance argues that:

'diversification will be key if we want to remain on top for the long run, and agriculture will be essential in this respect. Minerals and hydrocarbons are not renewable and it does not matter how exciting all these projects are or how much revenue they generate for the state's coffers, at the end of the day we are conscious that they are not renewable and will not last forever. Agriculture is, and I am very excited about the potential of this industry. It is time to follow up our words with real actions on the ground, as PNG sits right in the middle of the Asia Pacific region and, while this region has great demand for energy, it will also need plenty of food. PNG could be instrumental in providing regional food security. While the government is improving infrastructure, we are looking to attract investments from multinational firms to jump start the industry by offering 10-year tax holidays. This may take five to six years to materialise, but agricultural investment is extremely important for the growth of the nation, as 80% of the population depends on the sector. Agriculture is also important because it is part of our traditional culture and maintains lifestyles that can reduce poverty and migration' (Oxford Business Group, 2015: 43)

The country has indeed set ambitious targets for the sector and expansion plans for palm oil, coffee and cocoa are a key part of the government long-term strategy as presented below.

2.2 Alignment of agricultural policies with national development goals and objectives

When it comes to agricultural policy in PNG, Bourke indicates the following:

'Agriculture is a complex sector of the economy and involves many factors including the environment, land tenure, food security, export markets, domestic markets, prices of produce, costs of inputs, exchange rates, transport costs, subsidies, gender, education, research, information, labour and quarantine. This means firstly that many government policies impinge on agriculture and, secondly, that good policy making in agriculture is difficult. Thirdly, PNG is sometimes described as a 'weak state' because the government frequently does not have the capacity to enforce laws or to ensure that the many parts of a complex bureaucracy implement existing policies. Fourthly, because many present-day policies have evolved from the Australian colonial administration, they may reflect situations that have changed from the time they were developed. Lastly, agricultural policy in PNG is further complicated because it impacts directly on the welfare of the majority of the population. These are the people who live in rural areas and produce much of their own food and most of PNG's agricultural exports' (Bourke et al, 2009: 437)

Vision 2050, the Development Strategic Plan 2030, and STaRS (the National Strategy for

Responsible Sustainable Development) are the overarching policy documents that define the development road map for the country in the next 40 years. The relationship between them and their associated plans and budget are presented in Figure 2.1.

Figure 2.1: PNG Planning Framework (GoPNG, 2014)

VISION 2050

At the first level of PNG's planning framework is Vision 2050 launched in October 2009. The Constitution of Papua New Guinea is reinterpreted in Vision 2050 to define the aspirations of the nation for the year 2050. Vision 2050 therefore sets the long term direction for the country with guidance from the Constitution 'We will be a smart, wise, fair, and happy society by 2050'; and the accompanying development goal - 'to be ranked in the top 50 in the United Nations Human Development Index by 2050' (GoPNG, 2009).

Vision 2050 focuses on seven pillars or 'Strategic Focus Areas', from 2010 to 2050:

- Human Capital Development, Gender, Youth and People Empowerment;
- Wealth Creation
- Institutional Development and Service Delivery; Security and International Relations;
- Environmental Sustainability and Climate Change;
- Spiritual, Cultural, and Community Development; and
- Strategic Planning, Integration and Control.



Development Strategic Plan (DSP) 2010-2030

At the second level, the Development Strategic Plan 2010-2030 translates the focus areas and aspirations of Vision 2050 into concise directions. The goal of the development of the agriculture sector is to develop a “world-class agricultural sector that is responsive to international and domestic markets for a diverse range of products and provides the best available income and job opportunities” (GoPNG, 2010b).

The government considers there to be considerable scope for expansion of PNG's agricultural output, given the abundance of underutilised fertile land. An estimated 30 per cent of PNG's land has moderate to very high agricultural potential. However, less than 4 per cent of PNG's land is currently used for commercial agricultural production. Furthermore, PNG's agricultural sector is generally much less productive, and therefore much less profitable, than agricultural sectors in many other countries (GoPNG, 2010b). Accordingly, the DSP has set production targets for the agriculture sector to be achieved by 2030, as shown in the table below.

Table 2.2: DSP Targets for agriculture over 2010-2030

Indicators	Baseline	2030 Target/Objective
Coffee	63,000 tonnes in 2008	500,000 tonnes
Cocoa	56,000 tonnes in 2008	310,000 tonnes
Oil Palm	556,000 tonnes in 2007	1.5 million tonnes
Subsistence Agriculture	All villagers depend on subsistence	70% of subsistence farmers graduate to small and medium scale agricultural entrepreneurs

Source: GoPNG (2010b)

Successful implementation of the agriculture development strategy under DSP 2030 is projected to support a five-fold increase in agricultural production in PNG between 2010 and 2030, creating an estimated 267,400 additional jobs and K7.2 billion in additional national income by 2030. This substantial increase will be derived from a 180% increase in the use of land by agriculture and from a 60% improvement in agricultural productivity. Land reform will be necessary to provide the incentive to landowners to release their land for agricultural development. At an institutional level, the roles and functions of the Department of Agriculture and Livestock and other agencies within the sector need to be clarified. Role clarity will improve the delivery of the essential support functions of providing extension services, credit services and training (GoPNG, 2010b). These ambitions have not yet translated into practice with table 2.1 indicating export revenues at similar level in 2014 and 2010.

STaRS (National Strategy for Responsible Sustainable Development)

At the formation of the O'Neill-Dion Government in Alotau, after the 2012 elections, 78 key priorities were identified and agreed upon as the 'Alotau Accord' for implementation during its five-year term in office (2013-2017). One of the priorities of the Accord was the review of the current PNG DSP 2010-2030. For many key ministers the existing plan was not strategic enough and a new road map built on the principles of green growth and sustainable development was needed to achieve Vision 2050.

According to the GoPNG, *'the central theme of this new development road map presented by StaRS is to shift the country's socio-economic growth away from the current unsustainable growth strategy that it is following and towards a road map that is truly responsible, sustainable and able to place PNG in a competitive, advantageous position into the future. The current strategy of over reliance on nonrenewable energy and resource use shows positive GDP growth in the national balance sheet but, is carbon producing 'brown' or 'dirty' economic growth path, that contributes to increased global warming and climate change with its many negative effects such as; rising sea level and drowning of low level islands and coastal areas, and downgrading of environmental health and well-being of our citizen and biodiversity. This is clearly irresponsible and unsustainable. The StaRS therefore, calls for a paradigm shift towards a sustainable clean energy and resource using low or zero carbon-generating 'green' or 'clean' inclusive economic growth path aimed at strengthen PNG's strategic positioning and economic competitiveness in the world, while at the same time able to contribute to a high quality and better life for all Papua New Guineans now and in the future* (Emphasis added. GoPNG, 2014: 17). The StaRS represented a policy shift in long term planning to guide the actions of current and future governments to position PNG towards attaining the following goals:

- Being a leader in the promotion and establishment of the responsible sustainable development paradigm,
- Be a prosperous middle income country by 2030, and
- Be among the top 50 countries on Human Development Index by 2050.

This new perspective also acknowledges that the medium term development challenges require some reliance on the exploitation of primary resources to fund the investment needed for an inclusive and innovative green economic growth in the future (GoPNG, 2014).

STaRS provides the overarching strategic framework to discuss what can be done to reduce the future impact of key agricultural commodities on forest cover in PNG. It is the road map for mainstreaming sustainable development into development policy and action. It recognises that the current development strategy is eroding PNG's strategic assets (such as biodiversity, forests, fertile agricultural land, water and fisheries) and advocates for a paradigm shift towards sustainability. The STaRS document provides the basis for this paradigm shift through its 'green growth framework' presented in table 2.3.

Table 2.3: Green Growth Framework

<p>Dimension 1</p> <p>National Green Growth Plan to create Enabling Conditions.</p>	<p>Six National Enabling Conditions for green growth.</p> <ol style="list-style-type: none"> 1. Shift government expenditure 2. More effective enforcement of legislation 3. Research and Development and Education and Training 4. Resource and land rights regimes 5. Creating enabling conditions for psychological & behaviour change 6. Facilitating businesses to fully integrate sustainability & equity concerns
<p>Dimension 2</p> <p>Green Growth Mainstreaming Mechanisms</p>	<p>Four Green Growth Mainstreaming Mechanisms</p> <ol style="list-style-type: none"> 1. Public Environmental Expenditure Review 2. Strategic Environmental Assessment 3. Council for Sustainable Development 4. Green Accounting/Alternative Development Measures
<p>Dimension 3</p> <p>Green Growth Policy Instruments to Tap Spatial and Resource System Opportunities</p>	<p>Eight Green Growth Policy Instruments</p> <ol style="list-style-type: none"> 1. Certification of Sustainable Production and Trade 2. Subsidy Reforms 3. Payments for Ecosystem Services 4. Environmental Fiscal Reforms 5. Green Energy Investment Frameworks and Incentives 6. Inclusive Green Social Enterprises and Community based organizations 7. Sustainable Public Procurement 8. Green Innovation

Source: GoPNG, 2014

More effective enforcement of legislation, creating enabling conditions for psychological & behaviour change, conducting a public environmental expenditure review, establishing a council for sustainable development or certifying sustainable production and trade, as proposed by the Green Growth Framework, appear to provide some of the necessary enabling conditions, mechanisms and instruments for moving towards the production of sustainable agricultural commodities in PNG. How is it then translated into practice? How is it incorporated into government medium-term development planning and actions?

Medium Term Development Plans

Implementation of the DSP 2030 is spelled out at the third level of the strategic planning framework in rolling 5-year Medium Term Development Plans (MTDP). MTDP1 was developed for the period 2011-2015 and MTDP2 for the period 2016-2017. The primary drivers for developing the MTDP2 have been to incorporate STaRS into the Government's medium term planning and to align the MTDPs with the five year parliamentary cycle. MTDP2 will be in place for two years only and

MTDP3 will cover 2018 to 2022. MTDP2 is expected to begin the move towards a more sustainable economy following the new guiding principles for development planning provided by STARS:

'It will introduce the necessary indicators and targets that create the enabling environment to grow the economy while ensuring proper management and use of PNGs strategic assets. Under the current operational strategy natural assets such as forestry, biodiversity & eco-cultural tourism, fisheries & tuna, agriculture, water resources and clean renewal energy were generally considered to have an 'exploitation' value only. These assets, in particular forestry, tuna, water and biodiversity are considered strategic because they are globally significant. Under the MTDP2 government investment will focus on developing and strategically positioning these assets to meet the needs of current as well as future generations of Papua New Guineans' (GoPNG, 2015: 14).

The goal of the MTDP2 in the Agricultural sector is to support large scale agricultural enterprises and smallholder growers more generally to meet domestic and international needs. The following key strategic priorities are envisaged:

- Improvement of institutional capacity;
- Improvement of access to land;
- Development of key supply chains to link producers to markets;
- Provision of appropriate extension services;
- Development of coping and mitigation strategies for pests and diseases and climate change;
- Funding of research and development;
- Enforcement of CODEX marketing standards; and
- Utilization of Economic Corridors for agricultural development³The key indicators for the period of the MTDP2 are presented in table 2.4.

Table 2.4: Key indicators and targets for the agriculture & livestock sector in MTDP2 (GoPNG, 2015)

Indicators	Baseline		Targets 2017
	Value	Year	
Coffee production (60 kg bags)	911,598	2013	1,000,000
Oil Palm production ('000 tons)	630	2013	750
Cocoa production ('000 tons)	56	2013	60
Copra production ('000 tons)	129	2013	150
Proportion (%) of GDP in agriculture	27.1	2013	30
Growth rate of agriculture real value added (%)	0.5	2013	4.0

Source: GoPNG, 2015

The goals and targets for the next 2 years in the agricultural sector are quite conservative

³ The Economic Corridor concept was first introduced in the DSP 2010-2030 to alleviate poverty with 10 proposed regions categorised as 'economic corridor' (see GoPNG 2010b).

compared to the 'paradigm shift' and green growth framework presented in the STaRS long-term strategy. It is yet unclear how the shift to this green economy will fully translate into concrete actions in the future planning process (e.g. MTDP3) as compared to the existing modus operandi. No further information could be collected during our interviews in Port Moresby on the development of the national green growth plan, the establishment of a council for sustainable development or other aspects mentioned in the green growth framework.

Moreover, strong Monitoring & Evaluation mechanisms will be required to ensure the translation of the STaRS' aspirations into concrete actions. M&E mechanisms have lacked in the past and the government accordingly prepared another important piece of the Planning Framework: **The PNG Planning Act** introduced in the MTDP2. The proposed National Planning Act will link the long and medium term plans to the annual budget and establish the National Service Delivery Framework (NSDF) and the National Monitoring and Evaluation Framework (NMEF). It is the last element of the National Planning Framework.

The National Agricultural Development Plan (NADP)

Over the last 15 years various efforts have been made to develop a new policy environment for the agriculture sector that will be more conducive to new investment and growth of employment in commercial agriculture. By 2007 those efforts had brought about a National Agricultural Development Plan, which was directed toward sustainable transformation of the country's agriculture sector into a vibrant and productive economic sector that contributes to economic growth, social wellbeing, national food security and poverty alleviation for the period 2007-2016.

NADP's Mission was to enhance the quality of life for over 87% of the rural population through increased productivity, sustainable and quality production coupled with integrated planning and sustainable and environmental sustainable management. Its goals are closely interrelated and complementary: stimulate growth and sustainable development of the agriculture sector; improve food security, nutrition, incomes and employment opportunities of majority of rural population; improve the capacity of concerned institutions to generate technologies and extension services; increase the government institutional support to agriculture (GoPNG, 2007)

The Functional and Expenditure Review of Commodity Boards and Agencies (see next section) indicates the following in terms of NADP achievements:

"The aims of the NADP are admirable, but its implementation has been a debacle. The achievement of agricultural policy objectives requires more than just formulation of plans. It requires a robust policy development and monitoring system to implement those plans. Policy development must be guided by a set of general guiding principles relating to subsidisation and cost recovery for provision of government services to agriculture. Appropriate administrative mechanisms are required to ensure that policies are implemented, outcomes are monitored and corrective action is taken when required. And those administrative mechanisms need to be embedded in a legislative framework to ensure consistency in any government funding that is required. Unfortunately DAL had no plan to coordinate, monitor and evaluate NADP so it was left itself open to abuse and corruption (DAL, 2014: executive overview vii).

Other policies with relevance to agriculture commodities in PNG include the following: decentralization policy, privatization (state enterprises) policy, corporatization policy, agriculture training policy, food security policy⁴, Small and Medium Enterprises policy or the agriculture investment policy. A detailed account of these can be found in the Functional and Expenditure review of Commodity Boards and Agencies presented in the next section.

4 The draft National Food Security Policy for 2016-2025 was released in November 2015.

2.3 Functional and Expenditure Review (FER) of Commodity Boards and Agencies

The O'Neill-Dion Government announced this Functional and Expenditure Review (FER) of the Agriculture Commodity Boards and Agencies in March 2013 as an initial contribution to a major overhaul of government agencies serving the agricultural sector in PNG. The Government recognized at that time that a major overhaul was required because of the ongoing policy implementation problem that has been a pervasive feature of the agriculture sector of PNG over many years. Major reforms of government agencies in agriculture are needed to enable them to contribute effectively to key development outcomes relating to growth of production, exports, employment, household incomes, food security and increased private sector investment in the sector (DAL, 2014).

The impact of the review's recommendations on the agriculture sector is potentially transformative for the sector and requires particular attention. Some of the key changes proposed with particular relevance to sustainable agricultural commodities include the following:

- Restructuring of the Department of Agriculture and Livestock;
- Restructuring of the different Commodity Boards including the Cocoa Board, Coffee Industry Corporation and OPIC (to be replaced by an Oil Palm Commodity Board);
- New funding mechanisms for the agricultural sector to be embedded in legislation;
- Development of new extension policies;
- Definition of new rules for investors to operate in the agricultural sector.

The full list of 33 recommendations is presented in Annex 2 for reference. Following on the recommendations, the FER Implementation and Advisory Unit drafted two specific bills to provide the agricultural sector with a better overarching legislative framework.

1) The PNG Agricultural Administration Adjustment (AAA) Bill 2015

The PNG AAA Bill has been prepared primarily to redefine the role of the National Department of Agriculture & Livestock (DAL) so it can play an effective role as the agricultural sector apex body responsible for (a) development of policy and legislation, (b) coordination and monitoring of government policy implementation by commodity boards and agencies, and facilitation and linking of sector programs and resourcing requirements with government central agencies and external donors.

The AAA Bill shall clearly define the role of the DAL, all agriculture commodity boards and agencies, and provincial agencies and the manner in which they are intended to interact with each other. The closer cooperation between agencies is expected to enhance productivity, effectiveness and efficiency within the agriculture sector in addressing the developmental and livelihoods needs of the rural population.

2) The Agriculture Investment Corporation of PNG Bill 2015

The AIC of PNG bill has been prepared primarily to (a) provide for the establishment and management of the Agriculture Investment Corporation and (b) secure funding and manages investments in the agriculture sector. Against a backdrop of deficiencies in existing funding and governance arrangements, amongst other things, the FER recommended that an Investment Vehicle be established in the agricultural sector to promote and encourage new funding arrangements for innovation, growth of agribusiness micro, small and medium enterprises, large commercial investments and farm input subsidies support.

The National Executive Council (NEC) approved the PNG AAA Bill in November 2015 and the AIC of PNG bill is at the moment before NEC (Cocoa Board, In press).

These two bills are expected to have far reaching implications for the development of palm oil, coffee or cocoa in the coming years and for any activities related to sustainable agriculture commodities in PNG.

While those two new bills are aiming to address the current challenges facing the agricultural sector, concerns have been raised by some of our key informants with regards to the limited dialogue and consultation, and lack of transparency, over their development. Many people interviewed outside of the DAL were unclear about the potential outcomes of these new bills for the agricultural sector and what it will mean for them in the near future.

Another important missed opportunity appears to be a disconnect between the recommendations of the Functional Expenditure Review and the proposed long-term strategy of STaRS. The FER is looking at agriculture transformation and a new direction for enhancing productivity in agriculture largely outside of the framework proposed by the National Strategy for Responsible Sustainable Development. For example, neither the FER report nor the two bills make references related to the Green Growth Framework proposed under STaRS. This could be partly explained by the fact that both strategy development were conducted at similar times and their report both published in the beginning of 2014 but mostly results from the lack of coordination between DAL and the Department of National Planning and Monitoring. It will be essential for the newly formed DAL to address this disconnect in future MTDPs if the country is to achieve its long-term ambitions.

2.4 Key actors

Numerous national-level government agencies have roles in agricultural and rural industries. Key factors in determining their effectiveness is whether they have the resources and institutional linkages with other agencies and all levels of government to perform their specified functions and whether they have competent directors, managers and staff. Governance in the agricultural sector of PNG occurs at national, provincial, district and local levels and also by organisations devoted to particular crops and commodities. The relationship between the national and provincial governments is governed by the *Organic Law on Provincial Government and Local-Level Government 1995*. The Organic Law specifies which functions are held by the different levels of government.

According to Bourke, a 'lack of coordination, widespread confusion and ignorance of laws and regulations that govern responsibilities for service delivery, funding and reporting cripple attempts to make agriculture a primary driver of national economic and local rural development. The chaos results partly from the provisions of the 1995 reforms to the Organic Law and partly from the instability of political parties. The 1995 reforms have introduced confusion about relationships and responsibilities between national, provincial, district and local level governments. Within political parties, positions on the boards of bodies that govern and promote agriculture are used as rewards to supporters, who may not be competent or who may not act in the best interests of rural smallholders. This situation occurs in other sectors that are critical to agriculture: infrastructure, transport, education and health, such that agricultural development is subject to multiple constraints (...). On the basis of the past two decades, it seems unlikely agriculture will become the driver of economic growth that it could be, until at least some of these constraints of poor governance are removed (2009: 454).

The findings of our interviews largely support this view. We found a clear lack of coordination between different government agencies involved in the agricultural sector, and a general lack of dialogue and transparency between government, private sector, growers' association or civil society organisations. This results in a lack of trust amongst these different actors making it extremely difficult to work together and achieve win-win situations. Some of the key organisations

with relevance to discussion on sustainable agricultural commodities in PNG are briefly presented below.

Department of Agriculture and Livestock (DAL)

The functions of the national Department of Agriculture and Livestock (DAL) include providing policy advice and sector coordination relating to agriculture and livestock (including advice on the application of agricultural legislation, administered by statutory bodies); promoting agricultural development; assisting provincial governments with the provision of extension; and preparing and implementing appropriate investment programs for major commodities and livestock. In the 1970s DAL lost responsibility for extension services when they became a provincial function. Export tree crops research was transferred to specialised research institutions in the mid 1980s. During the 1990s, remaining research and quarantine functions held by DAL were moved into separate institutions, and commodity boards and corporations were given greater independence. The department struggled to adapt to its new role and wasted resources in trying to regain some of its lost functions. As mentioned previously, the recent Functional and Expenditure Review made a number of recommendations with regards to the restructuring of the DAL:

1. The functions of DAL have to be redefined so it can play an effective role as the agricultural sector apex body responsible for (a) development of policy and legislation, (b) coordination and monitoring of government policy implementation by commodity boards and provincial agencies, and (c) facilitation and linking of sector programs and resourcing requirements with government central agencies and external donors.
2. The Secretary of DAL should be given responsibility for scrutiny of commodity boards and agencies. It is proposed that the Secretary be enabled to do this as chairperson of the policy and funding entity to be called the Agriculture Investment Corporation.
3. DAL must address the issue of inadequate funding of various commodity boards and agencies in agriculture. It is important in the long run that effective funding mechanisms be determined and these be embedded in legislation so that there is continuity and sustainability of these sources of funding to agriculture institutions (DAL, 2014).

The Cocoa Board (CB)

The Cocoa Board regulates the cocoa industry in PNG. It was first established under the *Cocoa Industry Act 1974* and then replaced by the *Cocoa Act 1981*. According to the *Cocoa Act 1981*, it is the function of the board, acting in the best interest of cocoa growers in the country, and in accordance with any written directions given to it by the Minister:

- to control the growing, processing, marketing and export of cacao, cocoa beans and cocoa products;
- to establish price stabilisation, price equalisation and stockholdings arrangements within the cocoa industry;
- to promote the consumption of PNG cocoa beans and cocoa products;
- to promote research and development programmes for the benefit of the cocoa industry;
- When required by the Minister - to act as agent for, and to carry out the obligation of the State under any international arrangements relating to cocoa including all financial obligations of the state or Board under any international agreement; and
- generally to do such things that is necessary or convenient to be done by the board for giving effect to the Act.

The Cocoa Board head office is located in Kokopo. The management of the board comprise of the

office of the Chief Executive officer (CEO) looking after two divisions - the Field Operation Division (FOD) and the Corporate and Industry Services Division (CISD). The FOD is made up of export quality assurance, inspection and farmer extension and training. The CISD is made up of finance, human resources and administration, and economics and marketing. The Cocoa Board is represented throughout the country through its seven regional offices. These offices are located in Kokopo (which covers East New Britain and West New Britain provinces), Buka (covering the Autonomous Region of Bougainville), Kavieng (also covers Manus province), Wewak (also covers Sandaun province), Madang, Lae and Popondetta which also covers Milne Bay and Central provinces.

The Research & Development and extension services of the cocoa industry are provided by the PNG Cocoa Coconut Institute Limited (CCI). The CCI was established in August 2003 following the merger of the Cocoa and Coconut Research Institute and the Cocoa and Coconut Extension Agency. The Cocoa Board and the Kokonas Industri Koporesen (KIK) are the shareholding boards. Despite success in developing high yielding and cocoa pod borer (CPB) tolerant hybrid clones and a relatively functioning network of extension services, there are governance issues affecting its administration and management. The Institute has its own board but it is also responsible to its shareholder boards which can delay significantly decisions to be made on matters of policy or release of new technologies. Accordingly, the FER recommended that the Cocoa and KIK Boards remain separate entities and their R&D and extension functions should be subsumed into the two boards. CCI should be abolished. This process has begun and the Institute will be liquidated and existing functions transferred to the Cocoa Board which now need to cater for this expanded mandate. In terms of funding, the Cocoa Board receives funding mostly from the National Government to sustain its field services and regulatory functions. These include annual grants for recurrent (salaries and wages) and development project expenses; variable management levies from exporters and external donors money for specific projects. Management levies are received through deductions from the prices paid to exporters at the point of export. The current management levy is K40 per tonne - off this sum K13.5 per tonne is paid to CCI as an R&D levy (Cocoa Board, In Press).

The Coffee Industry Corporation (CIC)

Before 1991, coffee growing and exporting was governed by the Coffee Industry Board based at Goroka. Research on coffee was conducted by the Coffee Research Institute (set up in 1986) at Aiyura and extension to growers was the responsibility of the Coffee Development Agency. This last body was created after coffee rust appeared in PNG in 1986. In August 1991, the three organisations merged into the largely self-financing Coffee Industry Corporation Ltd (CIC). The CIC has a broad range of powers, including buying and selling coffee, setting prices, registering and controlling exports, setting quality standards and controlling credit worthiness and capacity of market participants. CIC is unusual in that it is established under the Companies Act, but has been granted specific regulatory functions and powers by parliament. In practice, the CIC only applies its regulatory functions to setting guidelines, implementing firm quality control, and approving export contracts (and contract prices). The marketing of coffee is left in the hands of private companies licensed by the corporation. CIC now has two divisions: the Research & Grower Services Division (made up of the Coffee Research Institute and Extension Services Division) and the Industry Operations Division. The CIC is well resourced (from an 10 toea/kg levy on green coffee beans).

Overall, CIC is mandated under the Coffee Industry Corporation Act (1991), to operate as a company to: (i) conduct scientific research into production, processing and waste management, and communicate coffee information through training and extension services to coffee farmers; and (ii) conduct industry regulation, licensing, inspections, export control, quality control, marketing and promotion, international relations, economics, finance and administration.

The Functional and Expenditure review recommends to have the CIC Act to be amended to have

the Coffee Industry Corporation changed to a Coffee Industry Board.

Oil Palm Industry Corporation (OPIC)

OPIC was established in 1992, as part of a reform of the oil palm industry in response to grower frustration over low prices, a then unsatisfactory pricing formula and declining government services. OPIC is funded by a levy on sales of fruit, matched by the oil palm companies. International aid funding has also provided significant financial support to the corporation. OPIC's main role is to provide extension services to smallholders in order to increase productivity, promote improved management, and enhance the wellbeing of producers. OPIC also liaises with government, the oil palm companies and other organisations involved in the industry. OPIC has five local planning committees, comprising representatives of smallholders, companies and the government, in five project areas (Hoskins, Bialla, Alotau, Popondetta, Kavieng). They are governed by a board that includes the state, Palm Oil Producers Association, PNG Oil Palm Research Association (PNGOPRA) and Smallholder representatives.

The FER proposes that 'an Oil Palm Commodity Board' should be established to take over the functions of OPIC and provide a formal consultative mechanism between the industry and government, with a view to facilitating further development of both the estate and smallholder sectors of this industry (DAL, 2014).

PNG Palm Oil Council

The PNG Palm Oil Council was established in 2011 by the private sector. According to the council they are the peak Body for Papua New Guinea's palm oil sector (a statement contested by the government). Its mission is to facilitate rural economic development in Papua New Guinea in an ecologically, socially and financially sustainable manner in order to improve the incomes & livelihoods of individuals, families and rural communities through the support of responsible palm oil businesses. The objectives and purposes of the council are to:

- facilitate, coordinate and strenuously promote sustainable palm oil production and development in PNG; and
- be the principal contact & coordination point for the palm oil sector in PNG; and
- be the principal link between palm oil producers and oil palm growers, Government, other public sector bodies and civil society in addressing policy, strategic and operational constraints to the sector's development; and
- provide technical advice & other information to palm oil producers and oil palm growers, Government, development agencies, civil society and others; and
- address sustainability, public opinion and market issues at a national and international level.

Climate Change and Development Authority (CCDA, previously OCCD)

The government passed the Climate Change and Management Act in November 2015 that enables the Office of Climate Change and Development (OCCD) to become the Climate Change and Development Authority (CCDA). Under the Act, the purpose of CCDA is to:

- Promote and manage climate compatible development through climate change mitigation and adaptation activities;
- Implement any obligations of the State under applicable rules of international laws and international agreements and to give effect to national commitments of Papua New Guinea, on a voluntary basis or otherwise under the UNFCCC and the Kyoto Protocol to which Papua New Guinea has acceded;
- Be Papua New Guinea's Designated National Authority or equivalent entity or

complementary or superseding entity and any relevant entity under the UNFCCC for the purposes of the Kyoto Protocol and any subsequent arrangements or agreement made under the UNFCCC that may supersede the Kyoto Protocol made thereto; and

- Administer compensation or incentive funds, grants, donor money and other funding derived from national and international sources under the direction of the Board to assist in the development of the climate compatibility economic endeavours and climate change adaptation and mitigation programs in Papua New Guinea.

This Act allows CCDA to handle all climate change issues pertaining to measuring, reporting and verification, mitigation and adaptation pertaining to climate change, and payments for environment services. The CCDA acts as a coordinating body for other government agencies and will not implement REDD+ sector programmes and activities. These will be implemented by government organisations, in particular PNGFA; they, in turn, will report back to CCDA regarding the activities that they have undertaken.

PNG Forest Authority (PNGFA)

The Papua New Guinea Forest Authority (PNGFA) was established in 1993 under the Forestry Act, 1991. The mandate of the PNGFA is to “Promote the management and wise utilization of the forest resources of PNG as a renewable asset for the well-being of present and future generations.” The National Forest Service (NFS) is the implementing arm of PNGFA. The governing body is the National Forest Board (NFB). The NFB oversees the national functions whilst the provincial business is controlled through the Provincial Forest Management Committees (PFMCs). The NFS is made up of the Office of the Managing Director and six directorates:

1. Forest Policy and Planning Directorate
2. Project Allocation Directorate
3. Field Services Directorate
4. Forest Development Directorate
5. Corporate Services Directorate
6. PNG Forest Research Institute (PNGFRI)

As a regulator of forest, PNGFA approves and issues Forest Clearance Authority (FCA) and Forest Management Authorities (FMA) Permits to the developers who apply to PNGFA to obtain Permits to commercialise timber harvesting. FCA is issued for special clearance for road and other activities such as SABL while FMA is issued for the developer to manage the forest resource over a 35 year cutting cycle period. Both the FCA and FMA come with specific guidelines for the developer to adhere to. Other timber agreements such as Timber Authority (TA) and Local forest Area (LFA) are also managed by PNGFA. PNGFA ensures that all provincial Forest Management Plans are incorporated into the national forest plan.

Department of Lands and Physical Planning (DLPP)

DLPP comprises of two divisions, the Lands Division which administers land matters and the Physical Planning Division which administers planning. The DLPP was established as a mandated body to regulate and administer land registration, land titles, dispute settlements regulations, and incorporation of land groups. Hence DLPP is primarily responsible to:

- Ensure efficient management of the State Land Leases with probity through land allocation and administration;
- Establish and maintain a framework of Physical Planning nationwide which aligns the ongoing conversion of land uses and spatial development with long term government objectives for sustainable economic and social development;
- Look after all survey matters and affairs of practising surveyors in PNG;

- Administer the registration of Valuers throughout PNG, the Valuers Registration Board, regulate practices of valuing and maintenance of standards of valuing and valuation of properties for local government rating purposes;
- Administer and providing reliable and accurate land information in PNG.
- Support and facilitating an orderly process for land transactions where land rights are guaranteed and titles registered and issued are indefeasible. That is to provide title registration and search service;
- Provide mapping products and services in PNG; and
- Provide customary land management services.

Conservation and Environment Protection Authority (CEPA)

CEPA was established under the Conservation and Environment Protection Act 2014 (CEPA Act) and takes over the role formerly undertaken by the Department of Environment and Conservation as PNG's environmental regulator. The head of the authority is the managing director who is broadly equivalent to the head of a government department. The managing director reports to a board. The minister, and through him the government, retains control over all policy matters and directs the managing director in this regard. The board exercises its powers under the act and the regulations, but also has power to make administrative orders to govern the internal affairs of CEPA, such as staff and financial matters. These administrative orders have legal force and will be used to provide for detailed rules regulating aspects of CEPA's operations. The basic regulatory framework remains largely unchanged but the establishment of a self-funded regulator should see the administration of applications for, and enforcement of, existing permits made more efficient. CEPA will be self-funded, with the legislation providing for environmental management fees of varying kinds (Oxford Business Group, 2015).

While CEPA is mandated by the Conservation and Environment Protection Act 2014 for administrative purposes, other mandates of the organisation still fall under the Environment Act 2000 and the Environment (Permit) Regulation 2002 which classifies all development activities under Level 1, Level 2 or Level 3 in order of their impact and significance. Level 3 has the highest impact and significance. These Acts allows CEPA to collect fees, approve projects, issue environment permits and regulate development activities.

At the moment, CEPA lacks adequate funding and capacity/skills to effectively carry its mandated functions⁵. There are limited connections between CEPA and provincial environmental officers and very weak coordination with other government departments regarding environmental protection and conservation (e.g. DAL, DLPP, PNGFA)

Productive Partnerships in Agriculture Project (PPAP)

The largest ongoing development program in the agriculture sector is the Productive Partnerships in Agriculture Project (PPAP) funded by a World Bank loan and implemented by DAL, CIC and CB which aims to improve the livelihoods of 60,000 coffee and cocoa farmers and their families. Initially launched in 2011, the project has shown sufficient potential for the World Bank to extend an additional 30 million USD in credit in February 2015 and extend the duration of the project to June 2019. According to the document prepared by the World Bank for the refinancing of the project, the estimated total cost of the project is USD 119 million. These include contributions from the World Bank with 55 million, IFAD – 36 million, European Union – 6.4 million, the GoPNG - 6 million and beneficiaries with 15.9 million (WB, 2014b).

⁵ CEPA is also currently supported by Japanese International Cooperation Agency on a project called 'Biodiversity Conservation through implementation of the PNG Policy on Protected Areas'. The project started in June 2015 and will be implemented over the next 5 years.

These funds are being used to tackle many of the recent challenges faced by coffee and cocoa farmers (see the baseline situation for the coffee and cocoa sector in the next chapter), chief among them include the lack of extension services in many areas; inadequate replanting with many trees long past their prime at more than 40 years old; and the devastating impact of Cocoa Pod Borer. Through the project, partnerships between farmers and NGOs, farmer group cooperatives and local businesses are selected and established under a competitive process.

The project has a strong focus on intensifying productivity in existing areas rather than to identify new growth areas. A recent overview of the project indicates that cocoa yields among project beneficiaries have increased by 122% from a 2011 baseline production level of 169 kg per ha through December 2014, and stood at 63% of the project target. With the further distribution of high-yielding clones and consolidation of training on best cocoa management practices, the project is now on track to meet the target of 600 kg per ha by 2019. Coffee growers participating in the program have exhibited similarly impressive yield growth from 2011 baseline yields of 382 kg per ha to 816 kg per ha by December 2014, far exceeding the targeted yields of 600 kg per ha (Oxford Business Group, 2015).

Table 2.5: Components of the PPAP

Components of the project	Key objectives
1. Institutional Strengthening and Industry Coordination.	(a) improve the performance of sector institutions and enhance industry coordination in the cocoa and coffee sectors; (b) improve transparency and support policy development in these sectors; (c) strengthen quality and promote, where appropriate, the adoption of certified sustainability practices in the two industries; and (d) provide technical advisory services, operational support and training to support project management and monitoring and evaluation.
2. Productive Partnerships	Supports the development and implementation of public-private alliances in project areas, with the goals of improving productivity and market linkages.
3. Market Access Infrastructure.	Improve market access for smallholder cocoa and coffee growers in the areas targeted under Component 2.

Source: WB, 2014b

Any attempt to move towards sustainable agricultural commodities in PNG will also have to closely engage with provincial and district government representatives, private investors and the various customary landowners groups involved in palm oil, cocoa and coffee production as well as a range of civil society organisations monitoring PNG's key social and environmental issues.

3. BASELINE SITUATION OF AGRICULTURAL COMMODITY PRODUCTION IN PNG

Key Findings

Palm oil is the first agriculture crop in terms of its economic importance to PNG.

- With exports of K 1.1 billion in 2014, palm oil accounts for 2/3 of agricultural exports and directly supports the livelihoods of around 170,000 people through a combination of direct employment in plantations and smallholder production.
- Palm oil exports from PNG represent only 1% of global exports. Almost 100% of palm oil produced in PNG is currently certified by the Roundtable on Sustainable Palm Oil with the main export market being Europe.

Palm oil is expected to have the largest impact on forest cover in the short to medium term.

- The government is targeting a ten-fold increase of production area in the next 15 years: from 150,000 ha in 2014 to 1,5 million in 2030.
- A large number of SABL contracts have been issued on the basis of future palm oil production with an estimated area of 1 million ha. Review of these indicates that only 180,000 ha are actually genuine investments (Nelson et al, 2013).
- Available information indicates that around 200,000 ha are already cleared and planted with palm oil. New investors are already in place in the provinces of East New Britain, New Ireland, Western Sepik and Eastern Sepik and new mills gradually entering into operations.
- Current expansion plans are not linked to any national palm oil policy and social and environmental requirements for new developments are either not defined or not adequately enforced. These developments make rapid expansion vulnerable to high environmental and social impacts and present a significant reputational risk for existing producers and PNG palm oil more broadly. Without better regulation, landowners can be left out with neither trees nor oil palm.
- Further research is needed on land suitability mapping for palm oil (including identifying the options for expansion that could comply with certification requirements) and the new oil palm developments.

Coffee & Cocoa present a lower risk on forest cover

- Coffee and cocoa are, respectively, the 2nd and 3rd most important agriculture crop in PNG.
- Around 85% of coffee production is coming from smallholders, 5% by blockholders of 20 ha and 10% by plantation. About 400,000 households representing over 2.5 million people depend on coffee as a main cash crop (1/3 of the population). In 2014, the sector contributed K450 million to the PNG economy in terms of export revenues. PNG's coffee production and export currently represent less than 1% of the world market share
- 95% of cocoa production is coming from smallholders and 5% by declining plantations. About 150,000 households representing over 2 million people in the coastal region of PNG depend on cocoa as a main cash crop. In 2014, the sector contributed K213 million to the PNG economy in terms of export revenue. PNG's cocoa production and export represent less than 2% of the world market share.
- Coffee and cocoa expansion plans are mostly focused on productivity and rehabilitation of existing blocks/plantations. Risks of deforestation exist in new growth areas (in the lowlands mostly) but appear to be limited compared to palm oil and in the absence of large-scale investments in the sector.

3.1 Palm Oil

Overview

Palm oil⁶ has been PNG's most valuable agricultural export since 2000, when it overtook coffee in this role. Oil palm production has expanded at a much greater rate than other export tree crops. However, a smaller proportion of the rural population is engaged in growing oil palm than for the other major export and domestically marketed crops. In 2007, the Oil Palm Research Association estimated that about 166 000 people (3% of the rural population) lived in households that produced oil palm. Many other people derive income directly or indirectly from the PNG oil palm industry, including those working on the nucleus estates. Four economic products are derived from the fruit of the oil palm: crude palm oil (CPO), palm kernel oil, refined palm oil and palm kernel expellent. Of these, crude palm oil is the most significant in terms of export volume and value. Oil palm is grown exclusively in lowland locations, up to a maximum altitude of 200 m. It is cultivated in areas where mean annual rainfall ranges from 2000 mm to 4200 mm. Although oil palm has been grown in PNG since the 1920s, commercial development did not commence until 1967 with the establishment of a private sector/ government joint venture at Hoskins in West New Britain Province (Bourke et al., 2009). There are currently two major palm oil producers operating in the country: New Britain Palm Oil Limited (NBPOL), and Hargy Oil Palms Limited (HOPL), a member of SIPEF Belgium Group).

New Britain Palm Oil Limited (NBPOL) is currently the largest producer of palm oil in PNG with over 82,000 hectares of established oil palm plantations (including 6,274 in Solomon Islands), a further 10,000 hectares under preparation for oil palm, over 5,700 hectares of sugar cane and a further 9,000 hectares of grazing pasture; twelve oil mills; two refineries, one in PNG, and one in Liverpool, UK, as well as a seed production and plant breeding facility. They had 23,107 employees in 2014. NBPOL is fully vertically integrated, producing its own seed (which it also sells globally) and planting, cultivating and harvesting its own land and processing and refining palm oil, in both PNG and the UK. It also contracts directly with its end customers in the EU and arranges shipping of its products. The company headquarters are in West New Britain province and they are also the largest domestic sugar and beef producer in Papua New Guinea. Since March 2015, they have been a wholly owned subsidiary of Sime Darby Plantation Sdn Bhd (NBPOL website).

Hargy Oil Palms Limited has developed around 13,500 hectares planted in 6 different oil palm Plantations from Bialla Town until Ulamona volcano. HOPL also assists local smallholders in their operations. There are currently 3,782 smallholders blocks for an estimate total area of 13,565 hectares. In 2015 the overall crop production has been around 485 000 ton of FFB (Fresh Fruit Bunches) (Hargy Website).

Including plantations and smallholders these two companies control around 150,000 ha of palm oil with 87% under NBPOL and 13% under HOPL.

6 This chapter presents the baseline situation for palm oil, coffee and cocoa in PNG without detailing the certification status of each commodity which is the subject of the next chapter.

Table 3.1: Operations of New Britain Palm Oil Limited in PNG in 2013

	Date of acquisition	Hectares of oil palm plantation	Tonnes of Crude Palm Oil (CPO)	Number of mills	Smallholder Blocks	RSPO certification
Poliamba (New Ireland)	2010	5,623 ha	24,939	1	1,561 blocks produce 18,7% of FFB	2012
West New Britain		36,948 ha	258,534	5	7,501 blocks produce 33,6% of FFB	2008
Higaturu Oil Palm	2010	8,819 ha	65,479	3	5,707 blocks produce 47,7% of FFB	2012
Milne Bay Estates	2010	10,730 ha	45,280	1	796 blocks produce 6,4% of FFB	2012
Ramu Agricultural Industries	2008	11,490 ha	35,673	1	220 blocks produce 2,7% of FFB	2010

Source: NBPOL, 2013.

Established in the 1960s, the original oil palm plantations were set up in Western New Britain according to the nucleus estate smallholder (NES) model. Under this system the smallholder is responsible for cultivating and harvesting their own crops on their land, while nearby milling companies (the nucleus) are responsible for the collection, transportation, and processing of the fresh fruit bunches, along with their own supply.

Initially the smallholder component of the NES model was based on a land settlement scheme (LSS) system, which granted settlers 99-year leases over blocks of at least six hectares on land purchased from customary owners. However, no further land settlement schemes have been undertaken since the mid-1990s due to a shortage of land for further settlement and problems associated with the system. An important issue is the number of people living on blocks of a fixed area. The existing LSS system has been supplemented by the village oil palm (VOP) system, which provides smallholders with blocks of two or four hectares on customary-owned land, with a Clan Land Usage Agreement giving the blockholder security of tenure and usage rights over the land. The three oldest NES developments, at Hoskins, Bialla and Popondetta, have nucleus estate, LSS and VOP components, while the newer NES developments in New Ireland and Milne Bay provinces have only nucleus estate and VOP components. With no further land available for land settlement schemes since the mid-1990s, many migrants have entered into informal arrangements to access customary land in the oil palm-growing areas of West New Britain Province. These arrangements are known as customary purchase blocks. The latest trend in oil palm development on customary-owned land is for landowning groups to form companies that lease customary land to oil palm plantation companies in exchange for rent and royalties. This system is known as the mini estate system. It is used by New Britain Palm Oil Limited. In 2007, 70,000 ha (55% of the total area) was planted to oil palm on plantations (including mini estates) and 58,000 ha planted on smallholdings (distributed between 5,100 LSS blocks and 12,400 VOP blocks) (Bourke et al., 2009).

Conflicts between companies and customary landowners over oil palm development are frequent in PNG. Interviews with one palm oil growers association indicates, for example, disagreement with NBPOL over prices calculation. They want a better share of the crop and a higher rent. One court case is ongoing between NBPOL and the Rigula mini estate in Hoskins. However, most court cases are currently SABL related. The growers association also complains that OPIC does not provide sufficient extension service to them and that they are not engaged in discussions regarding the future of the sector.

Unfortunately, there is currently no existing national palm oil policy or strategic plan as is the case for coffee and cocoa (see later section). This lack of sector policy is not helping the general lack of trust between landowning groups, companies and government involved in the palm oil sector and is detrimental to the future of the sector.

Crude palm oil and other associated product exports totalled PGK1.5bn (\$567.6m) in 2014, up 24.3% compared to the previous year, according to data from the Palm Oil Council (POC). Palm oil farmers sold another PGK20.56m (\$7.78m) worth of refined palm oil and other products on the domestic market along with PGK4.87m (\$1.84m) worth of oil palm seed. The largest purchaser of PNG palm products in 2014 was the Netherlands, which purchased 33.0% of the output followed closely by the UK with 32.8%, Germany with 22.5% and Spain accounting for 11.7% of the total (Oxford Business Group, 2015).

Table 3.2: Key Challenges and Opportunities facing the palm oil sector in PNG

Challenges	Opportunities
<ul style="list-style-type: none"> • Non conducive policy and regulatory environment: • Absence of a national sector policy; • lack of coordination, dialogue and trust between government and private sector (e.g. disagreement on who is the peak body for the industry) • Low productivity for smallholders (considerably lower than plantations) • Poor transport infrastructures • Insufficient extension services for smallholders • Security of land tenure • Land disputes associated with SABL arrangements • Encourages wide scale land clearing and may compete with food security • Conflict and social instability 	<ul style="list-style-type: none"> • Most valuable agricultural export in PNG • Potential to generate significant economic growth and poverty reduction • Important source of employment • Source of local infrastructure development (e.g. construction and maintenance of roads) • Global consumption and demand is rising • Associated social welfare services (education and health facilities etc.) • Currently almost 100% of palm oil produced in PNG is certified by the RSPO • Potential to raise productivity of smallholders

Source: Based on Anderson, 2006; ITC, 2011; Bourke et al., 2009

Expansion Plans

Expansion plans for palm oil in PNG are controversial with stakeholders having different views on the potential for palm oil development, accurate data being difficult to come by, a lack of transparency from new investors, and opacity of SABLs arrangements.

According to Babon and Gowae (2013), of concern for REDD+ is the likely extent of future forest clearance either for, or under the guise of, oil palm expansion. However, they argue that deforestation to make way for oil palm development is unlikely to reach the extent that it has in Indonesia and Malaysia. Palm oil produced in PNG is not internationally competitive due to higher labour and other costs⁷. Most oil palm producers in PNG have needed to exploit niche markets for sustainable oil palm and gain certification under the Roundtable for Sustainable Oil Palm (RSPO), which can provide a higher price per unit but which comes with strict rules preventing palm oil from being sourced from plantations that have cleared primary or high conservation value forests to plant oil palm (see next chapter). In 2009, Bourke indicated that given current and future plans for expansion, PNG production is likely to continue to increase in the medium term. However, the limited availability of suitable environments for oil palm is likely to restrict further expansion after around 2030 (Bourke et al., 2009). For others, although PNG currently accounts for just 1% of global exports, the sector's growth potential is vast. At present, 150,000 ha of land is being exploited for palm oil crop production, with an estimated additional 5.1m ha of suitable land going unused for agriculture (Oxford Business Group, 2015). Another report prepared for the Roundtable on Sustainable Palm Oil (Harris et al., 2013) investigates the potential magnitude of net carbon emissions under three scenarios of oil palm expansion until the year 2050 in Indonesia, Malaysia and PNG. According to the report, the island of New Guinea is still largely covered by relatively pristine natural forest and represents a major frontier for future palm expansion. As of 2010, each of the two parts of the island contained only a small amount (< 150,000 ha) of oil palm plantation area, but the industry is expected to grow dramatically by 2050. In the BAU scenario, the extent of oil palm plantations would expand 35 fold in comparison to 2010 levels in Indonesian Papua, and 23 fold in PNG. Due to the rapid rate of expansion and the lack of an extensive history of palm development in these regions, uncertainty is high regarding future plantation distribution (Harris et al., 2013). Cross-referencing different reports and interviews conducted in Port Moresby provide a slightly clearer picture on the existing situation regarding palm oil expansion in PNG.

Special Agricultural and Business Leases (SABLs)

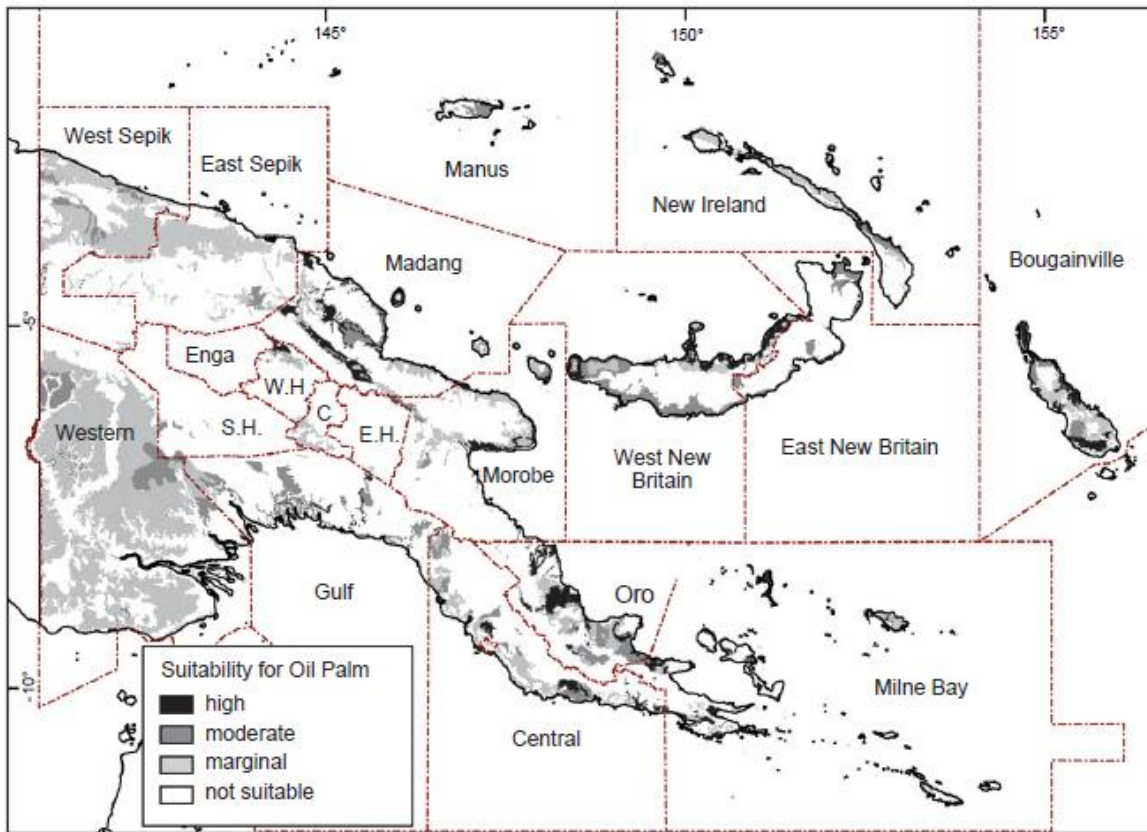
There are many proposed oil palm developments, mostly associated with Special Agricultural and Business Leases (SABLs) in which land tenure has been converted from customary ownership (the predominant form of land tenure in PNG) to long-term corporate leases. SABLs are based on a lease-lease-back arrangement, whereby customary landowners form an Incorporated Land Group (ILG), register their land for development and lease it to the government. The government then leases the land back to the ILG, which subleases it to a company to develop and manage. From 2003 to 2011, the area of land in SABLs rose exponentially, to a total of 5.5–5.6 million ha, about 12% of PNG's land area. In 2011, the Government imposed a moratorium on the issuing of SABLs and established a Commission of Inquiry to examine their legality (Nelson et al., 2013).⁸

7 According to Ian Orrell, one tonne of crude palm oil is 30% more expensive in PNG than in Indonesia. The relatively high cost of production are resulting from increased costs of labour, transport and energy, inefficient infrastructure, inflation and security issues <http://www.oxfordbusinessgroup.com/analysis/rise-very-active-palm-oil-production-earns-spot-among-top-exporters>

8 More information on the SABL issue from the community perspective can be found here <http://actnowpng.org/campaign/sabl>

A recent research examines the development objectives of SABLs proposals through an assessment of their land suitability, developer experience and capacity, and socio-legal constraints⁹. Their review reveals 36 oil palm proposals with plantings planned for 948,000 ha, a sevenfold increase over the existing planted area in PNG. However based on their criteria, they estimate that only five plantations covering 181,700 ha might eventuate within the foreseeable future (see figure 3.2 below).

Figure 3.1: Map of PNG showing provinces and suitability for oil palm cultivation. Province acronyms are: C, Chimbu; E.H., Eastern Highlands; S.H., Southern Highlands; W.H., Western Highlands.



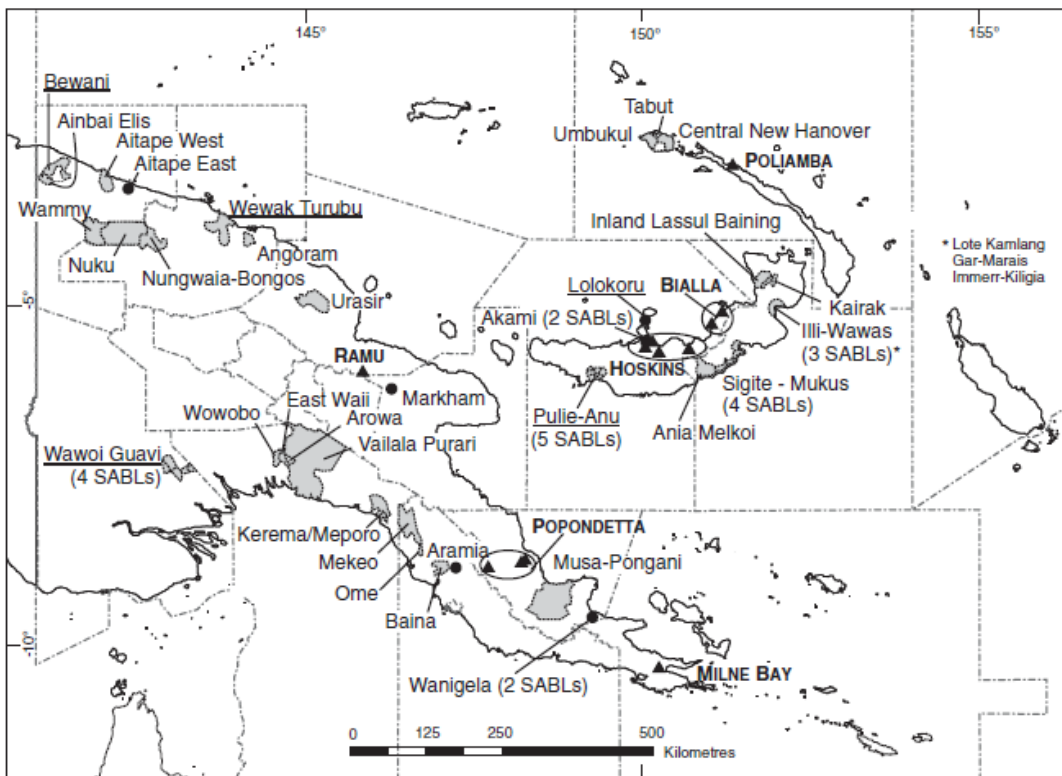
Source: Trangmar et al., 1995 in Nelson et al., 2013

Of the 36 oil palm proposals, 24 do not have sufficient suitable land to allow oil palm development (based partly on the map presented in figure 3.1) and 21 are controlled by companies with no experience in the oil palm industry. Both of these factors represent major constraints to oil palm development. Moreover, from reviewing legal documents and media reporting, they discover that 19 of the 36 proposals are currently facing major socio-legal constraints, mostly due to a lack of 'free, prior, and informed consent' from local landowners. Permits to clear forest for development (Forest Clearing Authorities) had been issued by the PNG Forest Authority for 15 of the proposals. In virtually all these cases the area of the Forest Clearing Authority was greater than that proposed for oil palm, and in most cases covered the entire lease. This discrepancy suggests that the clearing is intended not for oil palm, but rather for extraction of timber. Furthermore, at the time of

⁹ In terms of methodology, they examined all the SABLs involving "agroforestry" proposals that proposed planting oil palm following forest clearance. Information on the oil palm developments associated with SABLs was obtained from Environmental Inception Reports and Environmental Impact Statements submitted to the PNG Department of Environment and Conservation. Additional information on the SABLs and sociolegal disputes associated with them was obtained from transcripts of the Commission available from the websites of Canopy Watch and Act Now and from a report prepared for Greenpeace. Information about companies involved in these proposed "agroforestry" developments was obtained from company annual reports, industry and media reports, academic articles, and analyst reviews. Additional information on landowner and company disputes was obtained from the PNG newspapers (Nelson et al., 2013)

writing, none had commenced construction of a palm oil mill¹⁰. Viable developments normally ensure that a mill, which is the most expensive component of an oil palm development, is operating within several years of planting, as harvesting commences about 2 years after planting and the harvested fruit must be processed to generate income and return on the investment (Nelson et al., 2013). Overall, they argue that PNG's oil palm industry is likely to continue to expand slowly, contrary to the impression in the public domain that millions of hectares have been set aside for oil palm plantations in PNG. Most of the current proposals are unlikely to result in commercial plantations in the foreseeable future but appear to be a means of circumventing restrictions on logging which continues apace. To optimize the benefits of future agricultural developments, such as oil palm, while limiting deforestation, transparent consultation and agreements between developer companies and representative landowner groups, and strategic regional and local planning are required. Land use planning is traditionally the realm of government, but governance is weak in PNG so the onus to do it well will fall to the palm oil companies and the landowners, with public scrutiny playing an essential role (Nelson et al., 2013).

Figure 3.2: Location of operating palm oil mills (triangles) and SABLs with stated intentions of growing oil palm (grey shading, except where maps were not available, in which case the approximate location is shown as a black point). The five SABLs in which commercial oil palm plantations are most likely to eventuate according to Nelson research are underlined.



Source: Nelson et al., 2013

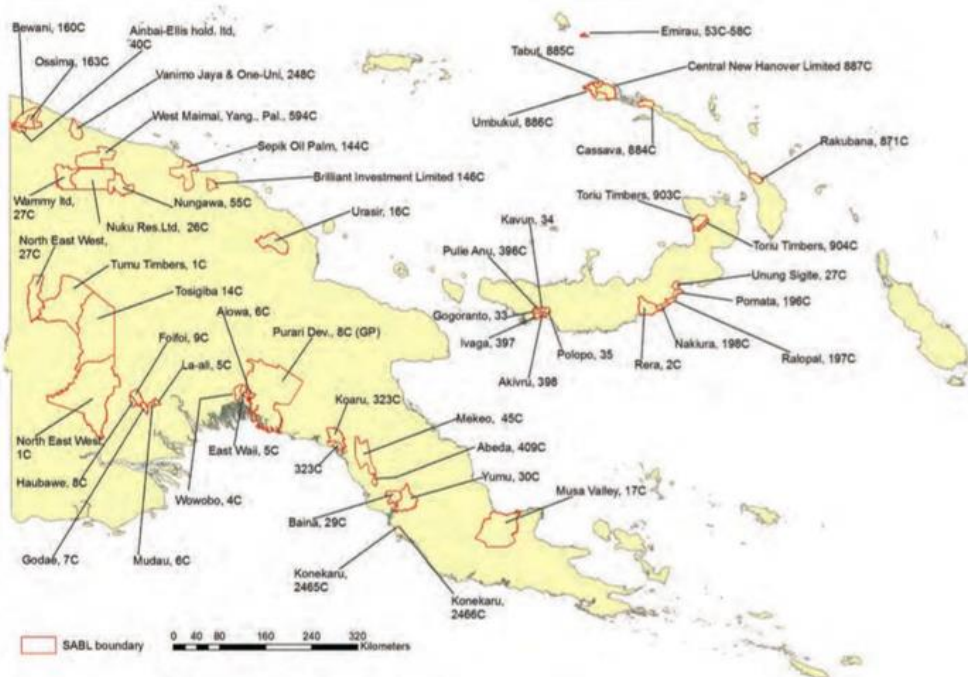
For Bryan & Sherman (2015), by far the biggest cause of forest change in SABLs between 2002 and 2014 was industrial logging and most of this logging was not followed by clearance to allow for the development of agricultural plantations¹¹. However, substantial oil palm plantations were created in four SABLs suggesting that this trend may change in the future. Two of these were in West Sepik province (Bewani Palm Oil Development Ltd and Ossima Resources Ltd near Vanimo),

¹⁰ This is not the case anymore as the Sigite Mukus Project by RH and Tzen Plantations have now build palm oil mills.

¹¹ The report presents an interesting table at the end with the forest area and change in the period 2002-2014 inside 52 of the largest SABLs. Interestingly, most of the names of the grantee/SABL projects are different than the one presented in the Appendix table of Nelson research presented above. Nelson indicates that the task of identifying the nominated developer in SABL sublease agreements was difficult due to a lack of transparency that obscured the identity of interests involved in the project agreements (Nelson et al., 2013).

and two were in East New Britain (Pomata Investment Ltd and Nakiura Investment Ltd). Both of these provinces are focal areas for expansion of the oil palm industry (see Figure 3.3). According to them 'PNG may be on the cusp of a period of major deforestation for agricultural development, such as has occurred in Indonesia and Malaysia in earlier decades' (Bryan et al., 2015).

Figure 3.3: Abbreviated name of each SABL grantee and portion number



Source: Bryan et al., 2015

Interviews with NBPOL indicated that they only see there being 15,000-20,000 ha of grassland in PNG that is viable for expansion in the next five years based on standards/certification (see next chapter for discussion on palm oil certification in PNG). They see a difficulty in expanding even into very degraded forest areas as these are also classified as 'forest' under current definitions. There are not many options for those who want to comply with certification schemes. Some grasslands are too dry. They would like help from government mapping work on identifying good areas for expansion that would not be environmentally damaging or impact high conservation areas.

With regards to SABLs, they see the need to not only target oil palm to help stop big agri-concessions but all crops as there is already evidence that developers thought there would be more scrutiny of oil palm developments and so have applied for concessions for cassava or rice or other commodities, something that would just get worse if there was tighter regulation on oil palm only. They also indicated that even for them it is difficult to find information as most new investors are highly secretive on their development plans.

Hargy Oil Palms have limited ambitions in terms of expansions: by 2020 Hargy will be sustainably producing no less than 170,000 tonnes of quality oil from a minimum of 15,000ha of plantation and 14,000ha of Smallholders (Hargy Website).

In their latest report on Papua New Guinea, the Oxford Business Group interviewed James Lau, Rimbunan Hijau Group 's managing director in PNG:

'For our project in Pomio, East New Britain, for example, we plan to plant 10,000 ha of oil palm in 2015 and we are employing as many as 3000 people in the process. From an investor's point of view, this is a real commitment that requires a significant amount of capital. Not many companies out there are willing to take the risk, especially for greenfield projects. While in countries like

Indonesia several players are keen to enter the market, in PNG the industry has attracted very few investors and has remained embryonic, despite its significant overall potential. Perhaps the negative campaigns of activists have affected the general perception of the industry, but it will not take away the fact that oil palm continues to be one of the most profitable crops in PNG, with a growing demand on the international market' (Oxford Business Group, 2015:48)

The project in Pomio is one of the SABLs controversial project with planned area for oil palm. RH's website indicates that The Sigite Mukus Integrated Rural Development Project in Pomio in East New Britain is the latest investment by RH in their long-term commitment to PNG. The project, currently in the development stage, is an approved area for agriculture development of 42,000 hectares, with 31,000 ha allocated for oil palm development. It includes an investment of more than K600 million for three palm oil mills and is expected to contribute royalties, premium payments, infrastructure levies and other community funding worth K834 million (US\$390 million) over the project's lifespan. Based on these figures, the project will inject around K33.4 million (US\$15.7 million) per year directly into the East New Britain economy. The Sigite Mukus project currently employs more than 450 people locally; this number is expected to grow to more than 3,000 people in the next three years¹².

A Malaysian press release indicated that Tzen Plantation Ltd / Tzen Nuigini which are part of the East New Britain Palm Oil Group inaugurated in 2014 a new US\$23 million mill. They had a total planted area of 6,300 ha in East New Britain in 2014 and with the new mill completed the group hopes to grow its planted area to 20,000 ha by end of 2016. The statement indicates that the group now employs 2000 people and generates 1.5 million kina a month off income to the local economy¹³.

Interviews with Tzen Nuigini staff indicate over 7,000ha planted in the Illi-Wawas Integrated Rural Development Project, Wide Bay (38,500 ha is the total lease area of the SABL), and another 5,000-6,000 ha at Kairak Oil Palm Project. They initially proposed to develop a further 11,000 ha at Kairak but most of the areas is not suitable so they will expand only to 2000 to 3000 ha more¹⁴. The company is planning to plant another 10,000ha at Warangoi. Informants from the company indicated that they already have done 4 shipments of palm oil to China. Further interviews with official from PNGFA in Eastern New Britain indicated that oil palm development has a big impact for the province as it brings infrastructures such as roads and bridges and services to the impacted areas where there were none before oil palm started. There is now a provincial plan indicating that the south coast will be for oil palm development (with existing operations of RH and Tzen Nuigini) while the north coast is for reforestation project. No information on the planned number of hectares for each development could be obtained.

In East and West Sepik provinces, many controversial SABLs oil palm projects are also under development. For example the Wewak Turubu Integrated Agriculture Project operated by Wewak Agriculture Development Corporation (a Malaysian company) with apparently 20,000 ha already planted (and 90,000 oil palm area planned in the SABL). The Bewani Oil Palm Development project by another Malaysian company with a SABL lease area of 140,000 ha and an estimated oil palm area of 26,000 ha¹⁵. Another recent example is a doubtful palm oil deal in Sepik between Kuala Lumpur Kepong (KLK) and the national government for 37,000 ha in an area where land is supposedly not suitable for palm oil development¹⁶. According to The National newspaper dated 15 April 2016, another development in New Ireland province worth K430 million was recently launched by the government. The Kaoagil Oil palm Project is a joint venture agreement between the landowner company Kaoagil Agri Development Ltd and its foreign development partner, Million

12 <http://www.rhpng.com.pg/oilpalm.html>

13 <http://www.thestar.com.my/business/business-news/2014/10/23/new-mill-underlines-tzen-commitment-in-papua-new-guinea/>

14 Out of this 11,000 ha initially planned, 5000 ha are currently planted with cocoa as they want to integrate cocoa and palm oil (interviews)

15 http://www.kln.gov.my/web/png_port-moresby/home/-/asset_publisher/8pPT/blog/official-signing-ceremony-between-prosper-palm-oil-products-marketing-sdn-bhd-and-the-bewani-landowners?redirect=/web/png_port-moresby/home

16 <https://chainreactionresearch.com/2015/09/23/klk-sepik-palm-oil-deal/>

Plus Corporation Ltd. A total of 35,000 ha will be planted in the first stage and an additional 50,000ha in the second stage¹⁷.

Interviews with the Oil Palm Industry Corporation (OPIC) indicated that in accordance with government long-term strategy they aim to develop 1 million ha of palm oil in the future with no specific timeline mentioned. They are supposedly identifying areas to do so. In those areas, they want to establish a new model with customary landowners to have a more equitable interest in the oil palm project (based on the Sarawak PELITA model). The key bottleneck for such expansion is finance - but they are optimistic that new investors will come in as they are the 'last frontier for palm oil'. They see certification as putting too many restrictions on deforestation while land needs to be unlocked for economic growth and poverty alleviation. OPIC indicated that there are currently important debates within the government on land mobilisation to achieve these targets. However no further information could be obtained on these at this stage.

As previously mentioned, the central government has made ambitious plans regarding the expansion of key agricultural commodities in its long-term strategy to 2030 and provinces are expected to fulfill these targets. For example, a report on land use planning for Madang province indicates that current expansion plans have been difficult to obtain and while it is expected most companies would operate in accordance with the Roundtable on Sustainable Palm Oil principles and criteria, considerable pressure will be placed upon the Madang Provincial Government to locate new oil palm estates in areas that avoid or minimize forest conversion (Banka et al., 2015).

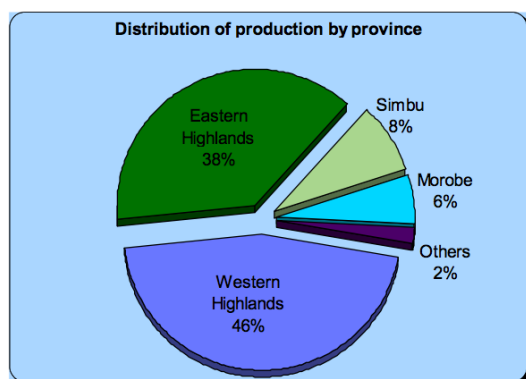
17 <http://www.emtv.com.pg/article.aspx?slug=Konagil-People-Eye-Oil-Palm-Project&subcategory=Top-Stories>

3.2 Coffee

Overview

Coffee is one of the largest employers in the agricultural sector in PNG. According to the 2000 National Census, 397,772 households are involved in growing coffee. This represents almost 2.5 million people. Most of the households in the highlands provinces depend on coffee as a major source of cash income there being no major alternative cash crops. In addition, the industry employs some 15,000 to 20,000 people as full time as well as part-time workers. As coffee income provides spin-off effects to industries such as transportation, construction, manufacturing retail and wholesale, insurance, banking and other allied industries, it also indirectly contributes income generation and employment creation in other sectors of the economy, particularly in the highlands provinces. Coffee is grown in 15 of the 20 provinces of PNG. Two types of coffee are planted: Arabica in the highlands and Robusta in the lowland coastal areas. In recent times the effect of climate change has also seen Robusta coffee planted in the higher altitudes of PNG.

Figure 3.4. Distribution of production by province



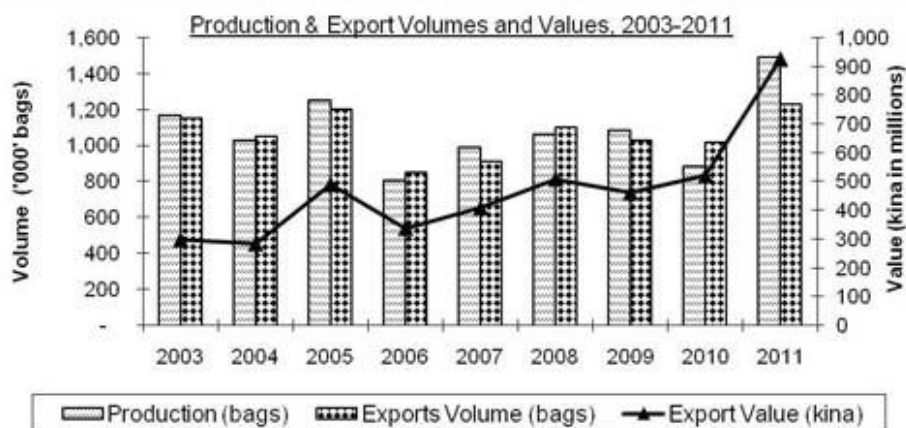
Source: CIC in Giovannucci, 2009¹⁸

In the early 1970s, PNG produced 27% of global coffee supply, and coffee production accounted for around one-third of the national economy. Due to ageing coffee trees and reduced assistance from development agencies, the sector fell into neglect over time. The country's share of global production today stands at a marginal 1%. Coffee continues to hold second place in agriculture exports with PGK331.8m (\$125.6m) in coffee beans shipped out from January to September 2014, nearly as much as the PGK336.7m (\$127.4m) sold in all of 2013. While the sluggish global economy through the first half of 2014 had a detrimental effect on coffee demand and prices in the early part of the year, a long spell of dry weather in Brazil – the world's largest producer of Arabica coffee – greatly reduced the size of the crop for the year, resulting in a sharp increase in coffee prices (Oxford Business Group, 2015).

Coffee production, exports volume and export revenue hit an all-time record in 2011, attributed to favorable weather conditions and favorable world and domestic market prices that prevailed throughout 2010 to 2011 calendar years which encouraged farmers to rehabilitate their coffee plots as well as harvesting all their crop for sale. Figure 3.5 shows that export earnings for the calendar year 2011 totalled K926.5 million an increase of 78% from K520.9 in 2010 earnings and the highest level ever recorded (CIC website).

18 The Western Highlands have now been separated into 2 provinces: Western Highland Province and Jiwaka.

Figure 3.5: Coffee Production, export volumes and values 2003-2011



Source: CIC website

According to CIC staff, around 720,000 green bean bags were exported in 2015. 2015 was badly hampered by *El Nino*. However, this year looks promising because after a prolong drought, the season is expected to be a 'bumper season'. 1.1 million bags are expected to be produced in 2016.

On a global scale, PNG is a modest exporter ranking 13th among 39 Arabica exporters and also shipping very small amounts of Robusta. It annually exports nearly all of its production or close to a million 60 kg bags. PNG exports almost all (99.9%) of the coffee it produces in green bean form; only 1% is exported in roast and ground form. According to CIC, the major coffee export destinations are Germany (44%), United States (18%), Australia (17%), Japan (9%), South Korea (2%), New Zealand (1%) others (9%).

There are three sorts of producers in PNG: Smallholders (those with less than 2.5 ha) representing 85% of production; Block holders (those with 2.5 – 30 ha) 5%; and plantations (over 30 ha) 10%.

Table 3.3: PNG Coffee basic participants

Small Producers	397,772
Blocks (2,5-30Ha)	680
Plantations (operational)	65
Wet Mills	47
Dry Mills	57
Exporters	22
Roasters	5

Source: Giovannucci et al, 2009, interview with CIC

Table 3.4. Estimates of producer farm size relative to production

Size (ha)	Total Area (ha)	Number of Farms	Production (green 60 Kg bags)	%	Yield (green kg/ha)
0-2.5	76,000	397,772	810,000	86	640
2.5-30	5,000	250	38,000	4	456
Over 30	9,000	60	98,000	10	653

Source: Giovannucci et al, 2009¹⁹

Achieving economies of scale and improving both producer capacity building and marketing require some sort of effective organization. For most smallholders to get beyond the most basic levels of agriculture, associativity is critical. Such producer organizations have reportedly not been very successful in the past in PNG. Trust and management skills being some of the most common hurdle for effective organisations. Regardless of the difficulty, organizations are a critical pre-requisite to significantly improve smallholder livelihoods and the competitiveness of the coffee sector.

Quality

In 2009, a strategic assessment of the coffee sector indicated that PNG's intrinsic production, processing and transport conditions mean that it is unlikely to be competitive in the provision of stock commodity-grade coffee. Instead, the best opportunities to improve PNG's competitiveness, as well as coffee sector incomes, may lie in the growing global trends toward differentiated goods. As such, the coffee national strategy should give priority to quality and differentiation rather than a policy focus on more production. The report further argues that the limited incentives available for producers make it difficult for any policies to influence production and thus exports. By focusing on quality, PNG could significantly improve its position in higher value markets well beyond the current 5% of coffee exports that are differentiated. To achieve differentiation, in a manner that increases sector revenue and producer sustainability, some shifts away will be required from a fragmented and not transparent sector toward greater associativity via groups and cooperatives and a commitment to offering sector participants practical quality and sustainability choices based on improved information. Greater private sector participation and a commitment to results-oriented capacity building and extension services will also be required. A new vision of PNG as a leading source for high quality and sustainably produced coffees for the world's finest markets can have valuable returns not only to the sector itself but also for PNG's international reputation (Giovannucci et al, 2009).

This view of 'better coffee rather than more coffee' was shared by the CIC during our interviews and is one of the reasons they started the coffee cupping competition where all cooperatives bring their coffee and the best producers are awarded and graded. International cupping experts are brought into the country to taste and judge and potentially linking the cooperatives directly to buyers.

19 Author estimates using 3 year average rounding and CIC Production data. Listed for illustrative purposes only, yield calculations are questionable. Production numbers are known but estimates for land area and number of farmers are estimated by CIC. Not all lands classed as farms are fully productive and may thus diminish yield calculations especially for larger producers.

Challenges and Opportunities

Table 3.5: Key Challenges and Opportunities facing the coffee sector in PNG

Challenges	Opportunities
<ul style="list-style-type: none"> • Inadequate incentives for quality production • high production costs • Weak associativity/cooperatives network • Lack of adequate knowledge generation and dissemination of the socio- economic factors affecting coffee and only modest dissemination of market intelligence including current (adjusted) price • difficult to access affordable financing including for farm inputs • Inadequate infrastructure, particularly access roads and good wet mills, not only increases production and marketing costs, but also reduces the overall quality of the coffees. • Theft in rural areas reportedly contributes to higher costs of production (frequent harvests and security) and considerable losses. • CIC by acting as a market participant and a market regulator diminishes its credibility as a neutral institution. Operating commercial farms or a marketing co-op may be a valid form of providing income or services but ought to be a separate operating concern. • The CIC's Strategic policy planning capacity must be integrated with other relevant sectoral institutions such as DAL and better coordinated with the private sector for more effective development. Better mechanisms to collect and integrate the views of the private sector and other important stakeholders could improve their currently limited participation in policy fora. 	<ul style="list-style-type: none"> • Diversified smallholder production landscape that spreads overall risk and reduces the danger of abandonment during periodic low prices or difficult times • Potential for more high quality production. • Good institutional governance body (CIC) accomplishes general oversight, research and extension, and provides some sector transparency via its information and analysis • The increasing interest and efforts toward smallholders organizing effectively are being met by new services and training options such as voluntary standards. • Levels of income can be reasonably increased through improved cultivation practices and tree renewal to improve the economic value produced per hectare with only modest extra investment. • Some of the larger exporters act as service providers engaging with some of their supplying farmers to offer supports that range from cultivation technology to inputs and credit. • There are some comparative advantages in the production of high quality and also sustainably certified coffees that can offer meaningful differentiation (i.e. Rainforest Alliance, Fair Trade, Organic, Utz Certified, and Starbucks C.A.F.E. Practices) and there is interest among exporters as well. • Some unique terroir and flavor profiles may provide an opportunity for the development of one or more Geographical Indications.

Source : Based on Giovannucci et al, 2009.

The Coffee Industry Corporation Strategic Plan 2008-2018

Table 3.6: CIC Strategic Plan 2008-2018

Vision	The World to Enjoy Papua New Guinea Coffee Rich in Aroma and Culture		
Mission	To Promote and Support the Continuing Development of a Sustainable Coffee Industry in PNG which will: (i.) Maximize Financial Returns to all Coffee Producers, and (ii.) Contribute to the Government's Economic and Social Policy Goals.		
Pillars	Increased and consistent production of high quality coffee;	Increased awareness of PNG coffee;	Enhanced CIC institutional capacity and governance.
Performance Indicators	Volume and Trends of Total Production and Exports Increase, Increase in Volume of Higher Grades (A/AA/ X/ PSC), Increase in Certification and Volume of Specialty Coffee (Sustainable Coffee), No. of Contracts for Certified Coffee, No. & Volume of Rejects.	Volume of High Value Organic coffee, High FOB Value, No. of Buyers Visits to PNG, Increased diversified export destinations, FOB Price & Differentials, Volume of Exports, New & Niche Markets, Volume of PNG Coffee treated as Origin, No. of International Trade Shows/Exhibitions Attended,	Increase in CIC Internal Revenue, Actual Expenditure Against Budget, Institutional Stability, Governance Systems in Place, Reduced Statutory Audit Qualification, CIC Subjected to contracted Audit, No. of Staff Trained, No. of Staff on Twinning Programs.
Example Strategies (Interventions)	Multi-Disciplinary Coffee Research, Demand Driven Extension and Education, Implement Coffee Curriculum and Establish Coffee College, Grower Mobilization and Cooperatives, District-by-District Smallholder Rehabilitation, Facilitate Supply Chain Linkages, Blocks and Plantation Rehabilitation, New Developments in Areas with Growth Potential, NurseryDevelopmentScheme, Minimizing Incidence and Impact of Pest and Diseases, Quality Control at Every Stage of the Value Chain,	CIC Marketing Unit, Targeting Higher Value Niche Markets, Integrated Market Development Strategy, Targeted Promotion.	Improve CIC Financial Sustainability, Develop CIC's Institutional Structure Processes and Procedures, Forge Strategic Alliances and Networks for Collaboration and Partnership, Appropriate Regulatory Framework, Environment, Gender and HIV/ AIDS, Land Issues, Planning, Monitoring and Evaluation (PM&E).

Source: CIC, 2008

PNG Coffee Expansion Plans

The CIC website indicates the following under their new growth areas section:

'The importance of coffee on the livelihood of rural Papua New Guineans has resulted in new growth areas being recognised. These areas have been under the watchful eyes of the CIC and especially involve lower lying coastal areas. Farmers have only recently shown interest in growing coffee in these areas and hence have been duly supported by CIC. The lowland farmers are now accepting coffee as an alternate cash crop to other traditional crops such as cocoa, coconut, vanilla and others. Farmers in East New Britain, New Ireland, Morobe and Sepik provinces are very keen to plant coffee.'

Table 3.7: Current expansion plans in the coffee sector in PNG

Baseline	63,000 tonnes in 2008
DSP 2030	Target of 500,000 tonnes by 2030
MTDP 2	Target of 60,000 tonnes by 2017
Coffee Industry Corporation Strategic Plan 2008-2018	Identified areas with potential for new developments. More attention is focused on these growth areas such as East New Britain, New Ireland, Oro, Central, Milne Bay, Southern Highlands and Enga with potential for new developments to increase production. Attention will also be given to remote areas of the traditional coffee growing provinces since they have potential for new development provided transportation considerations allow. The CIC will propagate and disseminate both traditional and improved planting materials to farmers for replanting and new development purposes. Partnership and networking will be encouraged with other government agencies, NGOs, and the private sector to implement this strategy.
Interviews	<p>CIC recently had a meeting with Rimbunan Hijau to look into the prospect of coffee roasting and marketing but they have no application for new plantations. CIC is now focusing on rehabilitating run-down plantations and blocks first. It has nursery with 1 million coffee seedlings in Madang to supply to region of East Sepik, West Sepik and Morobe provinces. Another 1 million seedlings is available to the existing farmers in the highlands. CIC mentioned that they are confident that no expansion would occur in the highlands due to existing land issues. If it would occur, farmers will plant on grassland areas. People are not going far away from their current locations because of poor road infrastructure and need better access to markets. However in the lowland there is more interest and more risk of expansion that may lead to forest clearance.</p> <p>There is a program called District by District which is looking into new suitable areas for coffee. CIC indicates that their vision for the future is quality (premium coffee exports) but government wants quantity (as reflected in the DSP 2030 targets). Government is funding 50% of CIC operations (in addition to the levy they collect on green coffee beans) so they have to also follow these targets on quantity (hence the seedlings program to plant new trees). However expansion in forested areas is expected to be minimal.</p> <p>PPAP staffs indicated that the project only works in existing block and they are not aware of any links to deforestation. Overall, coffee expansion is expected to have less impact than palm oil expansion.</p>

3.3 Cocoa

Overview²⁰ Cocoa is grown in 14 of the 22 provinces in PNG. East New Britain, AROB and East Sepik provinces are the major cocoa producing provinces in terms of production per metric tonne. According to the 2000 National Population Census, around 151,000 households cultivate and trade cocoa in those 14 provinces. This translates to an estimated 2 million people or 14% of the total population of the country. More recent data indicates that approximately 20 % of PNG's rural population is engaged in cocoa production, processing and sale (PAPP, 2014).

Table 3.8 shows cocoa production by provinces since the cocoa year 2004/2005. Production has fluctuated between a maximum of 51,888 tonnes in 2007/2008 and a minimum of 35,459 in 2013/2014. The decrease in production since 2009/2010 is a direct result of the impact of the Cocoa Pod Borer (CPB) and pruning of cocoa trees infected by CPB.

Table 3.8: Cocoa Production by provinces in tonnes between 2004 and 2014

Province	Cocoa Year (Oct/Sept)									
	2004/ 2005	2005/ 2006	2006/ 2007	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014
AROB	14,393	12,722	16,531	14, 632	19,504	16,833	17,180	13,160	13,087	10,406
East New Britain	20,227	18,229	17,995	19,279	12,327	7,375	7,527	4,258	4,527	4,518
East Sepik	2,697	3,904	3,987	9,759	12,418	9,444	17,071	13,547	13,252	11,347
Madang	3,740	3,547	3,899	3,779	2,649	2,012	2,053	4,258	6,338	5,178
Morobe	1,062	924	595	980	803	611	624	1,161	1,770	2,316
New Ireland	1,287	1,378	740	1,324	1,449	1,102	1,126	387	453	216
West New Britain	553	823	1,008	992	1,647	1,253	894	774	617	713
Sandaun	690	878	1,144	960	959	729	744	773	700	532
Oro	124	100	46	169	46	35	367	387	412	313
Manus	3	1	0	8	5	4	0	0	0	5
Milne Bay	5	2	3	6	3	2	2	3	0	4
	44,781	44,961	45,948	51,888	51,806	39,400	47,592	38,708	41,156	35,459

Source: Cocoa Board, In Press

At present, over 95% of cocoa is produced by smallholder village based growers and less than 5% from the plantation sector. Table 3.9 shows the production of cocoa per metric tonne, rounded to the nearest hundredth, over a 14-year period from 2000 to 2014 for both smallholder and plantation. The table shows that production growth in the cocoa industry continues to be dominated by the smallholder sector and conversely a decline in the plantation sector. Therefore it is expected that any foreseeable growth and sustainability of the industry over the medium-term will depend on growth in the smallholder sector.

Table 3.9: Cocoa production by sector from 2000/01 to 2013/14

Year	Smallholders (Metric Tonne)	Plantation (Metric Tonne)
2000/2001	20,000	5,000
2001/2002	35,000	4,500
2002/2003	37,000	5,000
2003/2004	29,000	4,500
2004/2005	40,000	5,000
2005/2006	40,000	5,000

20 This section is largely based on the Cocoa Industry Strategic Plan prepared by the Cocoa Board of Papua New Guinea (Cocoa Board, *In Press*). Other used references are indicated when necessary.

2006/2007	40,000	4,500
2007/2008	48,000	4,000
2008/2009	50,000	3,500
2009/2010	38,000	3,000
2010/2011	47,000	2,000
2011/2012	38,000	1,500
2012/2013	41,000	1,000
2013/2014	35,000	700

Source: Cocoa Board, In Press

Smallholder productivity is low, estimated at 0.3 tonnes/hectare, compared with plantation yields under high management of 1.0-2.5 tonnes/hectare, and research trials which have recorded yields of up to 2.5 tonnes/hectare using hybrid clone varieties. The clones are resistant to CPB and of high yielding quality. The Cocoa Board is looking to move away from a subsistence based production to propagating an intensive, business-oriented and entrepreneurial based production system to stimulate cocoa production (Cocoa Board, *In Press*).

The add-hoc committee of the ICCO in 2012 graded PNG cocoa as being 90% fine or flavour cocoa, thus making PNG cocoa highly sought after and popular among consumers for its quality attributes. The other 10% was attributed to smoke taint arising from faulty wood fuelled kiln pipe dryers.

According to the Oxford Business Group *'Local growers can command a premium for their exports, with PNG producing a greater proportion of highly regarded cocoa beans than Indonesia, which churns out nearly 10 times the amount of product but sacrifices quantity for quality. Approximately 90% of the cocoa beans produced in PNG for export are classified as "fine or flavour" beans by the ICCO Panel on Fine or Flavour Cocoa compared to only 1% for Indonesian beans, most of which are "bulk" or "ordinary". Fine or flavour beans, which make up around 40-50% of the total global cocoa market, command a premium price. As a result, they are used by major chocolate manufacturers in Western Europe and to a lesser extent in Japan, the US and Latin America to produce premium-quality chocolate'* (Oxford Business Group, 2015:184).

A recent report from the World Bank found women to be key to ensuring quality in cocoa. Therefore, it recommends that if PNG wants to export better quality cocoa it needs to focus on the contribution of women; improving their skills and capacities, and giving women a greater share of the benefits (WB, 2014).

Table 3.10 presents some of the key challenges and opportunities of the sector as identified by the Cocoa Board in PNG.

Table 3.10: Key Challenges and Opportunities facing the cocoa sector in PNG

Challenges	Opportunities
<ul style="list-style-type: none"> Stagnant and low smallholder productivity; Age and senility of current cocoa planting; Cocoa Pod Borer (CPB) infestation and the risk of exporting it; Smoke tainted cocoa beans; Poor access to credit facilities by smallholder producers; Poor post-harvest handling equipment such as cocoa bean fermentaries and driers; Farmers not treating cocoa as a business; Poor roads, transport and market 	<ul style="list-style-type: none"> A well established R&D institute; Availability of high yielding and CPB tolerant cocoa planting materials; Integrated pest and disease management technology (IPDM); Availability of extension teams in almost all cocoa growing provinces; Resilient smallholder farmers; Private sector actors showing signs of their willingness to mobilise growers to improve productivity and production; and

<ul style="list-style-type: none"> • Deficient port and shipping facilities, resulting in high freight costs; and • Shortage of skilled manpower and capital along the value chain. 	<ul style="list-style-type: none"> • Collaboration with international donor agencies
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Source : Cocoa Board, In Press

Several companies are involved in the buying, processing and exporting of cocoa beans to overseas markets. There are more than 20 registered cocoa exporters in PNG. The major cocoa exporters and their market share in 2005 and 2014 are summarised in table 3.11. Despite losses in market share in the past 10 years, The Agmark group of companies is still the major player in cocoa export with a 38% export market share in 2014. The 3 biggest player Agmark, Outspan and Monpi Cocoa Exporters represented 70% of export market share in 2014.

Table 3.11: Cocoa Export market shares in percentage by exporters

Exporter	2005 (%)	2014 (%)	% gain (+) / decline (-)
NGIP Agmark	43	38	-5
Outspan	20	22	+2
Monpi Cocoa Exporters	6	10	+4
Sepik Coastal	18	5	-13
Waiyu Mining	6	7	+1
Others (minor)	7	18	+11

Source : Cocoa Board, In Press

The majority of cocoa beans from PNG are exported to South East Asia. These are mostly used for blending with bulk cocoa from Asia. Most of the big cocoa processors like Barry Callebaut and ADM have processing plants in Singapore, Malaysia and Indonesia. In 2014 the major exports destinations for PNG cocoa beans were Malaysia (32%) followed by Indonesia (19%), United states (16%), Belgium (13%), Singapore (8%), Thailand (6%), Germany (4%), and Switzerland (1%).

From 2008 to 2011 earnings from cocoa remained above K300 million per annum, reaching its highest level in 2009 at K359 million. Thereafter earnings from cocoa reduced for various reasons including the low production caused by CPB infestation, low market prices for cocoa and the strengthening of the Kina-USD exchange rate. In 2014, cocoa export earnings were at K243 million. Cocoa is the largest single source of income in East New Britain Province and the Autonomous Region of Bougainville. Poor infrastructure is costly to the industry. The Cocoa Board estimates, conservatively, that about 10,000 to 15,000 tonnes of cocoa do not reach the markets due to absent or inadequate transportation.

For John Nightingale, the Managing Director of Agmark '*Demand for cocoa from PNG on the international market has remained strong, relative to other origins, due to the consistency of quality, its unique flavour and its traceability. We have some concerns that quality control standards have slipped, but our own internal controls remain very high. PNG cocoa production could quadruple and we would have no trouble selling every bean, such is the demand, but production has fallen from a high of 56,000 tonnes in 2013 to 31,500 tonnes in 2014. This was due to an infestation by cocoa pod borers and the senility of many cocoa trees. Agmark has been at the forefront of the development of management strategies to combat pests by replanting trees with high-yield clones, spot spraying, harvesting regularly, maintaining rigid pruning regimes and improving cocoa block hygiene practices. East New Britain was the hardest hit province, with production dropping from over 20,000 tonnes to 4100 in 2013. This has removed more than PGK100m (\$37.8m) from farmers' pockets each year for several years. Traders margins have also been reduced, because the decline in production has eroded economies of scale*' (Oxford Business Group, 2015:186)

In terms of price, the FOB (Free-On Board) price is the price received by exporters, the DIS (Delivery-in-store) price is the price received by the farmers at the exporters or factory gate, and the WB (Wet Bean) is the price for unprocessed cocoa beans.

Prices steadily increased from 2005 to 2010 and declined sharply after that reaching a low in 2012 and finally regaining some ground in 2013 and 2014. The average DIS price was about K3,751 per tonne in 2005 , K7,221 per tonne in 2010 before falling back to K3,795 per tonne in 2012. In 2014, the DIS price averaged K6,826 per tonne, 81 % higher than the same period in 2013. The market fundamentals that have supported prices include higher demand for cocoa and the depreciation of the PNG Kina against the US dollar which continued to drive prices higher and strong demand from Asia and other emerging economies (Cocoa Board, *In Press*).

The Cocoa Industry Strategic Plan 2016-2025

The Cocoa Board Strategic Plan 2008/09-2017/18 was the last formal strategic plan prepared by the Cocoa Board. In 2011, the Cocoa Board MTDP Aligned Sector Plan 2011-2015 was prepared to guide the Cocoa Board in carrying out its functions in tandem with the Government new development agenda as enshrined in the DSP 2030 and the MTDP I. This document is now expired requiring the development of a new strategic plan.

In addition it was necessary to integrate the expanded mandate of the board as recommended by the FER of commodity boards and Agencies in PNG (e.g. the integration of cocoa research and extension services functions).

The Cocoa Board first began the process of developing a new cocoa industry strategic plan in 2014. It conducted several regional stakeholder consultations to come up with issues and challenges to develop the 2016-2025 strategic plan. A summarised version of some of the key elements of the plan is presented in table 3.12.

Table 3.12: Cocoa Strategic Plan 2016-2025

Vision	Prosperous, happy and healthy rural communities ; dynamic, innovative , competitive and sustainable cocoa industry
Mission	Improve production, productivity, quality and competitiveness of the cocoa industry. These will be achieved through innovative research, extension services and enabling policy, regulatory and business environments and productive partnership with stakeholders and other actors along the cocoa value and supply chains.
Guiding Principles	<ul style="list-style-type: none"> • Aligned with national and sectoral development goals • Multi-stockholders and multi-stakeholders with inclusive engagement from the beginning • market-driven and business-oriented with projects rooted in viable business models • driven by research, extension and innovation • Holistic, integrating value chains that benefit all actors in the industry
Thematic Programs and associated Strategies	<p>1. Policy, Regulatory and Business Environment <i>Review and amend the Cocoa Act 1981 and Regulations, appointment of new Board, land mobilisation and utilisation, policy research and analysis, forging productive advocacy forums.</i></p> <p>2. Production and Productivity Improvement <i>Mobilization of production and marketing units, better utilisation of factor inputs, adoption and application of improved technologies, reduce smoke tainted cocoa beans through increased adoption and utilisation of combination solar dryers, resilient cocoa production systems and developing less expensive solar dryers.</i></p> <p>3. Extension Services <i>Improved information research, packagingm and effective communication and utilisation of information and technologies through stakeholder collaboration and networking.</i></p>

	<p>4. Business Development and Marketing Secure new investments, develop strategies to incubate and nurture new cocoa business enterprises and promote and develop market infrastructure.</p> <p>5. Corporate Support Services Conduct regular performance, finance, management audits, functional and organisational structure, M&E, learning and capacity building, procurement and prudent resources management.</p>
Funding	To be determined after the formulation of business plans for each of the thematic programs and their respective projects

Expansion Plans

The National Government's long term production target in the cocoa sector is to achieve 310,000 tonnes by the year 2030 (see table 3.12). The Cocoa Board indicates the following “*this target may be too ambitious; however is technically possible and depends largely on improving the productivity of the smallholder sector, adoption and utilisation of new high yielding varieties and management technologies, and large-scale investment which can lead to expansion of new areas planted to cocoa. This calls for a renewed commitment, both by the industry and the government, in addressing current constraints being faced by small farmers in accessing appropriate technological innovations, adequate level of farm credit to facilitate the purchase of desired inputs, and extension support in improving their farm productivity levels. **Land mobilisation and large-scale investment in the cocoa industry are desirable to seriously pursue the DSP target**” (Emphasis added; Cocoa Board, In Press: 33).*

At the moment, an increase in production is most likely to come from productivity improvements and the utilisation of new high yielding varieties and management technologies. While there are plans to establish 'new growth areas' it seems that in the near future there may be minor expansion into undisturbed forest areas (PPAP staff, personal communication, March 2016). Nonetheless, it would be essential to follow-up closely on any potential future 'large-scale investment' in the cocoa sector.

Table 3.13: Current expansion plans in the cocoa sector in PNG

Baseline	35,459 tonnes (in 2013/2014)
DSP 2030	Target of 310,000 tonnes by 2030 (10 fold increase)
MTDP 2	Target of 60,000 tonnes by 2017
Cocoa Industry Strategic Plan 2016-2025	<p>No specific figures mentioned but reference are made to the following activities :</p> <ul style="list-style-type: none"> • Production and productivity improvements in the smallholder sector • Adoption and utilisation of new high yielding varieties and management technologies • Land mobilisation and utilisation – establishment of new growth areas. • Securing new investments in cocoa development • develop strategies to incubate and nurture new cocoa business enterprises • District Cocoa Nursery Project Initiative to increase the planted area to cocoa in 6 districtis (Yangoru/Saussia, Maprik, Middle Ramu, Madang, Gazelle, Kokopo)

John Nightingale, Managing Director of Agmark further argues that “*The government has announced that it will not renew licences for traders unless they agree to invest in plantations covering a minimum of 10,000 ha. However, traders have been operating in this country for many decades. As a result, I doubt very much that investors would want to put their money in PNG if they*

were aware that there would be no exporter access through the private sector. We were cocoa growers and we became exporters. Agmark is now a listed firm with 4500 shareholders and over 1500 employees, with about 2600 ha of land. So, it would be odd – to say the least – if we were no longer allowed to continue exporting from PNG. In general, there is not enough consultation between the cocoa board and the industry as a whole. It is possible to find people in Port Moresby dictating conditions for other regions that are impossible to implement on the ground. Further to this, the availability of land continues to be one of the biggest stumbling blocks for the growth of the agriculture industry in PNG, and I do wonder where the proposed 10,000 ha of land for each trader and exporter could come from” (Oxford Business Group, 2015: 186).

4. SUSTAINABLE COMMODITY CERTIFICATION

Key Findings

- Voluntary standards have the potential to improve the economic, social and environmental performance of agricultural commodities.
- Further expansion of certification in PNG will significantly contribute to reducing the future impact of coffee, cocoa and palm oil production on forest cover in PNG while at the same benefiting PNG's people and the economy.
- Sustainable commodities, as defined by products that are demonstrably (e.g. third-party verified) compliant with internationally recognized standards for sustainable practice, are growing rapidly, and at a pace far faster than markets for conventional commodities. In 2012, global standard-compliant production accounted for:
 - 40% of coffee production (15% in 2008)
 - 22% of cocoa production (3% in 2008)
 - 15% of palm oil production (2% in 2008)

Palm Oil

- Three standards certify oil palm production: Rainforest Alliance/SAN, organic and Roundtable on Sustainable Palm Oil (RSPO). Currently only RSPO operates in PNG. There are plans to introduce Rainforest Alliance next season;
- One way PNG's palm oil producers compete is by marketing quality over quantity, specifically by attending RSPO certification (as the price is much higher than in Indonesia).
- Papua New Guinea is the 3rd country after Malaysia and Indonesia in terms of RSPO certified oil palm area – and PNG is the country with the highest shares of RSPO area of the total oil palm area – 93% in 2014;
- New developments in forested areas are unlikely to comply with the requirements of the RSPO or any other existing voluntary standards (e.g. 'standard cut off dates' or 'free, prior and informed consent'); Therefore, there are two types of oil palm production in PNG (i) one grown under the certification process of RSPO or other standards, which the European Market increasingly demands, (ii) one grown outside of certification schemes with new investors likely to sell to the China or India markets in the short to medium term.
- A national code of practice/standard at production level and its enforcement is urgently needed for new investors if PNG wants to maintain its reputation and maintain access to western markets;
- Land suitability mapping should be conducted for sustainable palm oil (where expansion could occur and implications for certification)

Coffee and Cocoa

- Five standards certify coffee production: 4C Association, Fairtrade International, Organic, Rainforest Alliance/SAN and UTZ Certified. All of them operates in PNG.
- Four Standards certify cocoa production: Fairtrade International, Organic, Rainforest Alliance/SAN and UTZ Certified. 3 of them operates in PNG.
- The potential for coffee/cocoa certification in Papua New Guinea is much higher than its current level of production (currently below 10% for each commodity). There is low capacity among smallholders and government to address certification – support is needed for training, farmer organisation and market access. Despite these challenges, some initiatives are showing success in recent years.

4.1 Global Market Overview

Voluntary sustainability standards (VSS) have the potential to improve environmental, social and economic performance for a wide array of industry, product and supply chain sectors. In some sectors, concerns related to social or environmental considerations at the farm or plantation level (e.g. agriculture, food or forestry sector) are the primary focus behind voluntary standard efforts whereas other sectors prioritize concerns related to worker health and safety (e.g. textiles and apparel). The principles and criteria associated with a given standard can vary greatly but usually includes a social dimension (e.g. human rights, labour rights, gender, health and safety, employment conditions/benefits, community involvement), environmental dimension (e.g. soil, biodiversity, use of GMOs, waste, water, energy, greenhouses gas, use of inputs) and economic dimension (e.g. living wage, premiums).

Currently, more than 400 consumer-facing eco-labels are operating across the globe. While many of these remain targeted to specific audiences defined along geographical lines, a growing number of global standards initiatives are aimed at altering the way global commodity production and trade are undertaken. Most such initiatives today focus on the agriculture and forestry sectors, which together are estimated to account for more than one-third of all human-sourced greenhouse gases.

In 2012, global standard-compliant production accounted for:

- **40 per cent of coffee production**
- **22 per cent of cocoa production**
- **15 per cent of palm oil production**
- **9 per cent of forest area.**

In every commodity market in which they operate, these standards are growing at rates well beyond the growth rate of production and consumption within the commodity markets themselves, with many initiatives exhibiting compound annual growth rates above 50 per cent over the last five years (IISD, 2014).

According to the International Trade Centre, VSS are no longer a novelty serving niche markets. For more than a decade, they have increasingly been finding their way into mainstream markets. There are many reasons for the growing adoption of sustainability standards. For some, adherence to a set of recognized principles for sustainable practice represents a stepping stone to implementing best practices within their supply chains. For others, compliance with a given standard may offer a strategy for managing reputational risks or even supply risks. Regardless of the reasons, the message has been, and continues to be, clear: sustainable commodities, as defined by products that are demonstrably (e.g. third-party verified) compliant with internationally recognized standards for sustainable practice, are growing rapidly, and at a pace far faster than markets for conventional commodities. Most standards are showing exceptional growth (e.g. RSPO had an almost 30-fold increase of its area between 2008 and 2014), expanding their agricultural land coverage and covering higher share of the total area indicating potential for significant global impact (ITC, 2015).

Nonetheless, sustainable markets continue to be defined by persistent oversupply of standard-compliant production: While standard-compliant production has reached significant levels across selected commodities, actual sales of products as “standard compliant” have not grown as rapidly, resulting in significant oversupply (typically between one-third and one-half of total compliant production is actually sold as compliant). This situation means that companies have ample choice for sustainable sourcing (positive outcome), but also suggests that the market may be placing downward pressure on the prices of sustainable products due to oversupply (negative outcome).

Table 4.1: Sustainable Markets. Compliant production as a percentage of global production

Commodity	2008	2012
Coffee	15%	40%
Cocoa	3%	22%
Palm Oil	2%	15%

Source: Adapted from IISD, 2014.

VSS are usually engaged in a number of interrelated and complex web of activities including standard setting, marketing & labelling, conformity assessment (e.g. certification, verification), farmer support activities / capacity building, and traceability systems to help ensure the integrity of claims made on the market (see table 4.2).

Table 4.2: Traceability systems used in sustainable commodity production (adapted from IISD, 2014).

Book and Claim	Where a certificate of sustainability is granted based on the application of sustainable practices and volume of product produced, but certification is completely decoupled from the product and is transferable on the market.
Mass Balance	Where the amount of compliant product sourced and sold by each supply chain actor is tracked, but where the compliant product does not need to be sold with the certificate.
Segregation	Where compliant products are segregated at all stages of the supply chain, and only compliant products are sold as compliant products.
Identity Preservation	Where the product is individually identified, physically separated, and tracked and documented at each stage of the supply chain.

In the context of sustainable agricultural commodities in PNG, any increase in cocoa, coffee or palm oil certification in the future will most likely involve one of the voluntary standards presented in the table below.

Table 4.3: Overview of some of the key voluntary standards operating in the Palm Oil, Coffee and Cocoa Supply Chain.

4C ASSOCIATION (Single sector Coffee only)	Founded in 2006, the 4C Association is a member-based initiative operating in the coffee sector across 22 countries. As a baseline, product-specific standard, the 4C code implementation process provides a phased-in approach toward full compliance. This phased-in approach makes it possible for producers who are either unfamiliar or not yet able to comply with more stringent certification initiatives to gain market recognition for adopting commitments to more sustainable production. One of the objectives of the 4C Association is to prepare producers for eventual compliance with other consumer-facing initiatives. The initiative operates business to business, developing standards and verifying compliance with these standards in order to ensure sustainable coffee practices among its members. All 4C units are required to submit self-assessments and undergo subsequent verification audits by accredited third-party auditors. The 4C Association applies the identity preservation and segregation models of supply chain traceability at the unit level. The supply chain traceability model of mass balance is also used; however, the licence/certificate must be passed on with the coffee up to final buyer level. The initiative is funded primarily by membership fees.
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<p>FairTrade International (multi-sector includes cocoa and coffee)</p>	<p>Founded in 1997, Fairtrade International is a member-based initiative operating within the food and agriculture sector across 120 countries. The initiative coordinates Fairtrade labelling at the international level. Fairtrade sets minimum pricing and premium levels as part of its commitment to poverty reduction for developing country producers. The initiative operates business to consumer. A separate certification company, FLO-CERT, inspects producers and traders to ensure they comply with Fairtrade standards. Full re-assessment for Fairtrade's certificates is conducted every three years. Within this three-year period, yearly surveillance audits and random field checks are performed. All audits are conducted by third-party auditors. The three supply chain traceability models of identity preservation, segregation and mass balance models are applied to all Fairtrade products to ensure accountability of compliance claims in the marketplace. The initiative's primary source of revenue is from membership fees and grants.</p>
<p>RSPO (Single Sector Palm Oil only)</p>	<p>Founded in 2004, the Roundtable on Sustainable Palm Oil (RSPO) is a member-based initiative operating in the palm oil sector across 71 countries. The initiative aims to achieve mainstream market uptake of sustainable palm oil production and processing. To this end, the Working Group on Smallholders was initiated to promote smallholder participation in the RSPO. The initiative operates business to consumer, developing standards and providing certification services to ensure sustainable palm oil production among its members. RSPO-compliant enterprises undergo annual surveillance audits during the five-year certification period. All audits are conducted by third-party, accredited auditors. RSPO offers a separate supply chain certification and applies all four models of supply chain traceability—identity preservation, segregation, mass balance, and book-and-claim—to its products. The initiative is funded primarily by certified sustainable palm oil trading fees.</p>
<p>UTZ certified (multi-sector includes coffee and cocoa)</p>	<p>Founded in 2002, UTZ Certified is a multi-stakeholder initiative operating in the food and agriculture sector across 33 countries. Originally an idea of a Guatemalan coffee grower and a Dutch coffee roaster, UTZ Certified has grown into an independent, non-governmental, not-for-profit organization dedicated to creating a world where sustainable farming is the norm. The initiative operates business to consumer, developing standards, providing certification and marketing the UTZ label through and with its partners, in order to ensure sustainable agricultural practices. All UTZ units are certified yearly, with all audits conducted by third-party auditors. UTZ also offers a separate Chain of Custody certification. The initiative applies the identity preservation and segregation models of supply chain traceability to all its products. Membership fees constitute the primary source of revenue for UTZ.</p>
<p>RAINFOREST ALLIANCE / SAN (Multi-sector includes coffee, palm oil & cocoa)</p>	<p>Founded in 1987, the Rainforest Alliance/Sustainable Agriculture Network (SAN/RA) is a member-based initiative operating in the food and agriculture sector across 43 countries. The Rainforest Alliance and SAN represent a unique bi-party approach to standards development, conformity assessment and marketing. SAN is a coalition of independent, mostly Southern non-profit conservation organizations that promote the social and environmental sustainability of agricultural activities by developing standards and supporting technical assistance. SAN is the sole standard-setting body for Rainforest Alliance Certified agricultural products. The Rainforest Alliance manages labelling and marketing support of SAN-compliant products. The initiative operates business to consumer, developing standards, providing certification and marketing the Rainforest Alliance label in order to ensure sustainable agricultural practices. SAN</p>

	<p>units are certified every three years. All audits are conducted by third-party auditors. SAN offers a separate Chain of Custody certification and applies the identity preservation, segregation and mass balance models of supply chain traceability to its products. The agricultural related work of Rainforest Alliance is funded primarily by membership fees and public grants.</p>
<p>IFOAM (Multi-sector includes coffee, palm oil & cocoa</p>	<p>Founded in 1972, the International Federation of Organic Agriculture Movements (IFOAM) is a member-based initiative operating in the food and agriculture sector across 116 countries. As an international umbrella organization, IFOAM sets standards and quality assurance systems for organic standards. IFOAM plays a special role in the organic sector as an association of standards, and the initiative unites organic stakeholders, advocates long-term social and ecological change, facilitates production and trade, assists organic development, and provides training. The initiative operates business to consumer, developing standards to ensure sustainable agriculture practices among its members. IFOAM-compliant enterprises are required to undergo a full assessment every year for recertification. Third-party, accredited auditors conduct all audits. The identity preservation and segregation models of supply chain traceability are applied to IFOAM's food and agriculture products. The initiative's primary source of revenue is from fees and services.</p>

Source: Adapted from IISD, 2014

4.2 Palm Oil

The International Environment

In 2015, oil palm was grown on 18 million hectares worldwide. This represented 0.4% of the global agricultural land. The countries with the largest area were Indonesia (7 million ha), Malaysia (4.6 million ha), Nigeria (3 million ha), Thailand (0.6 million ha) and Ghana (0.36 million ha). This represented 87% of the total oil palm area. In 2013, 266 million metric tons of oil palm were produced worldwide, and 54 million metric tons of palm oil (ITC, 2015).

Three Voluntary Sustainability Standards *organic*, *Rainforest Alliance/SAN* and *RSPO* – certify oil palm production. Combined, they certified a minimum of 2,504,000 hectares and a maximum of 2,545,000 hectares in 2013 (average 2,524,000 hectares)²¹. RSPO has the largest certified oil palm area and showed the largest area growth in recent years (ITC, 2015). **Organic** oil palm represented 0.02% of the global oil palm area, or an estimated harvested area of 3,600 hectares. Organic oil palm was produced in five countries, with the biggest areas in Colombia (1,200 hectares) and Ecuador (900 hectares). The organic oil palm area has decreased by almost 80% since 2008.

Almost 37,000 hectares of oil palm worldwide were **Rainforest Alliance/SAN**-certified in 2013. More than 930,000 metric tons of Rainforest Alliance/SAN oil palm were reported. In 2013, three countries were producing Rainforest Alliance/SAN oil palm: Guatemala (almost 25,000 hectares), Honduras (more than 8,000 hectares) and Colombia (almost 4,000 hectares). The Rainforest Alliance/SAN oil palm area increased by 40% between 2013 and 2014.

The RSPO certified more than 2.5 million hectares of oil palm in 2013, representing 13.7% of the global oil palm area. Almost 11.9 million metric tons of palm oil were produced that year. RSPO was active in nine countries, and the largest areas were in Indonesia (1.2 million hectares) and Malaysia (more than 1 million hectares). Between 2012 and 2014, the RSPO oil palm area increased by 60% reflecting the trend of exceptional growth of voluntary standards in recent years (ITC, 2015).

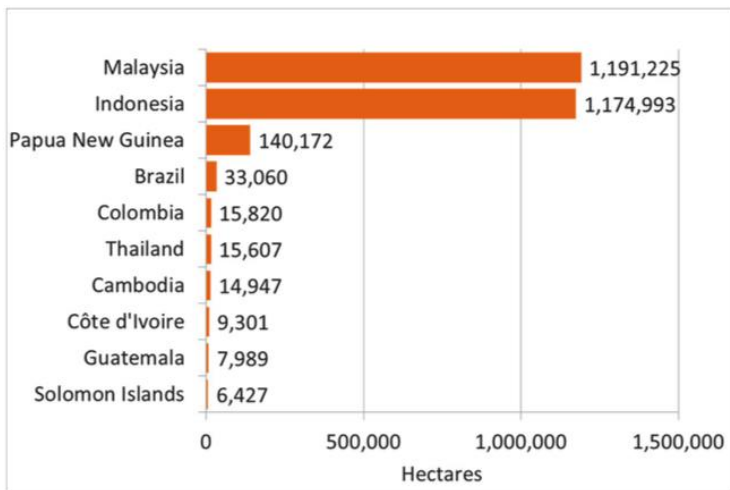
The Domestic Environment

According to Ian Orrell, a tonne of crude palm oil is on average 30% more expensive to produce in PNG than in Indonesia due to the high costs of doing business in PNG (the relatively high cost of production resulting from increased costs of labour, transport and energy, inefficient infrastructure, inflation and security issues). One way PNG's palm oil producers compete is by marketing quality over quantity, specifically by achieving RSPO certification. Such certification allows PNG's producers to access lucrative selective markets in the EU (95% of PNG's palm oil is exported to the EU)²². PNG is the 3rd country after Malaysia and Indonesia in terms of RSPO certified oil palm area (see figure 4.1).

Figure 4.1: Oil palm & RSPO: Top 10 countries with the largest oil palm area, 2014

21 This variation in number is due to multiple certification as many of the areas certified by VSS are multiple-certified.

22 <http://www.oxfordbusinessgroup.com/analysis/rise-very-active-palm-oil-production-earns-spot-among-top-exporters>



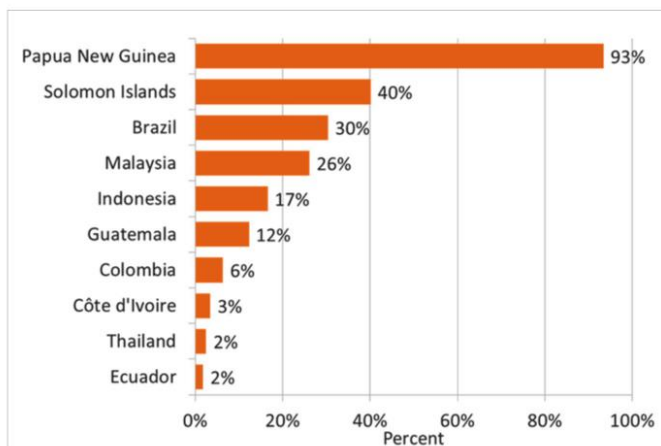
Source: (RSPO, 2015) in ITC 2015.

All operations of NBPOL and HOPL are currently certified representing in 2014 around 140,000 Ha. This includes both the plantations and smallholders.

For NBPOL, certification also means that more smallholders are implementing better agricultural practices, which help to increase their yields, provide them with a cash sustainability premium and ensure that they can improve their livelihoods without harm to the natural environment. Their latest sustainability report indicates that they are sharing the premium they receive for sustainability certification with smallholders. In 2013, West New Britain smallholders received a premium of \$4,44 per MT of FFB while smallholders in Ramu received \$4,96 (NBPOL, 2013).

RSPO is, at the moment, the only voluntary standard operating on oil palm in Papua New Guinea. Interestingly, PNG was the country with the highest shares of RSPO area of the total oil palm area – 93% - in 2014 (see figure 4.2).

Figure 4.2: Top 10 countries with the highest shares of RSPO area of the total oil palm area, 2014



Source: (RSPO, 2015) in ITC 2015.

The Papua New Guinea National Interpretation of the RSPO Principles and Criteria were developed by a National Interpretation Working Group (NIWG) and approved by the RSPO Secretariat on 1st September 2015. The document indicates that given the strength, comprehensiveness and applicability of the International Generic Criteria, the PNG NIWG resolved that PNG would adopt the International Generic Criteria for small producing countries as the

National Interpretation for Papua New Guinea, rather than produce a full National Interpretation (RSPO, 2015)²³.

Participants of the NIWG include PNG Palm Oil Council, NBPOL, Hargy Oil Palm Limited, Oil Palm Growers Association (Hoskins, Bialla, Popondetta), Civil Society representatives (Eco Forestry Forum, Institute of National Affairs, etc.), PNGOPRA, and representation of the office of climate change²⁴. Paul Barker, Executive Director of the Institute of National Affairs is the current chair of the National Interpretation Working Group. The group also submitted to the RSPO in March 2016 an amended version of the National Interpretation document in parts to reflect issues of lacking of documentation on land title in the context of oil palm smallholder Land Settlement Schemes. According to the RSPO website the current members of the roundtable in Papua New Guinea include:

- New Britain Palm Oil Limited (NBPOL)
- Oil Palm Industry Corporation (OPIC)
- Papua New Guinea Oil Palm Research Association (PNGOPRA)
- PNG Palm Oil Council
- SPZ Enterprises

In the case of SPZ enterprises' profile (Geoff Palm), the website indicates the following:

'SPZ ENterprises (PNG) Pty Ltd has partnered with the resource-owning communities, Landowners/ Paramount Chiefs and the State of Papua New Guinea to develop about 80,000 ha of the 110,000 ha Nungwaia Bongos Integrated Large Scale Agriculture Project in East Sepik Province into palm plantations, including FFB processing facilities, with oil palm outgrower components. These developments will continually maintain and advocate sustainable practices for the palm oil production, marketing and consumption. Community Development (CSR) will be a prominent feature of our productions. Towards these objectives, we are in the process of appointing a Group Sustainability Manager, three Government/ Community Relations Officers and one Corporate Affairs manager/ We shall comply with the Code of Conduct of RSPO. We will also ensure that this project is in the best interests of Papua New Guineans) and the world) by adhering to the Fourth National Goal and Directive Principle of The Constitution of PNG'.

This is part of a SABL lease being contested by local communities²⁵. This area has not been certified by RSPO and the current certification or membership status is not known. The current status of Hargy Oil Palm Limited membership is also not clear as SIPEF is not mentioned as a member. NBPOL positioned itself very early on the sustainability market and are seen by many as one of the champions of sustainability in the palm oil sector in Papua New Guinea. Interviews with company officials indicated that NBPOL is currently looking at introducing a double certification in the coming season (2017) with the addition of Rainforest Alliance/ SAN. According to them, the marketing potential of Rainforest Alliance is potentially higher than RSPO (pers comm.)

An environmental code of practice for the processing industry was also developed in 2013 in line with RSPO requirements (DEC, 2013). However, many stakeholders believes that a national code of practice/standard at production level is urgently needed to regulate the new investors. Existing certified operations are worried about the potential new oil palm development in areas acquired under SABLs. Such developments are unlikely to comply with the requirements of the RSPO (e.g. principles of conservation of natural resources, responsible development of new plantings, community rights, etc.) or any other existing voluntary standards. For instance, new areas developed in East New Britain (e.g. RH, Tzen Nuigini) or in Sepik are unlikely to comply with cut off dates after which time conversion of land cannot take place.

According to NBPOL, the potential for certifying new areas in PNG is limited to grasslands area

23 RSPO Principles and Criteria can be found here <http://www.rspo.org/resources/key-documents/certification/rspo-principles-and-criteria>

24 Minutes of the 2014 meeting to agree the national interpretation can be found here http://www.rspo.org/file/RSPO%20PNG%20NIWG%20Meeting%20Minutes%202029_01_2014b.pdf

25 See for example <http://www.farmlandgrab.org/post/print/24061>

representing a maximum of around 15 to 20,000 ha. This is a much lower figure than the expansion plans in the palm oil sector presented in the previous section. Updated land suitability mapping are needed to understand exactly where expansion could occur and under what circumstances for certification.

PNG currently have two types of oil palm production (i) one grown under the certification process of RSPO or other standards, which the European Market increasingly demands, and (ii) one grown outside of certification schemes with new investors likely to sell to the China or India markets in the short term.

These new developments are posing a significant reputational risk for PNG's oil palm national industry in the short term. While RSPO is a voluntary standard, there is a need for a regulatory standard or policy at national level to maintain the reputation of Papua New Guinea in terms of sustainability. This issue was also raised in previous meetings of the RSPO National Interpretation Working Group. The strong business case for the government to only support the development of sustainable palm oil in the future is presented in the next chapter.

4.3 Coffee

The International Environment

In 2015, coffee was grown on more than 10 million hectares worldwide. This represented 0.19% of the global agricultural land. The largest producing countries were Brazil (almost 2.1 million hectares), Indonesia (1.2 million hectares), Colombia (almost 0.8 million hectares), Mexico (0.7 million hectares) and Viet Nam (almost 0.6 million hectares). This represented 53% of the total coffee area. In 2013, almost 9 million metric tons were produced worldwide.

Five Voluntary Sustainability Standards (VSS) – 4C Association, Fairtrade International, Organic, Rainforest Alliance/SAN and UTZ Certified – certified coffee production. Many coffee areas certified by these voluntary standards are multiple-certified.

More than 1.4 million hectares of coffee worldwide were **4C Association**-certified in 2013, representing 14.4% of the global coffee area. Almost 2.4 million metric tons of 4C Association coffee were reported. 4C Association was present in some of the most important coffee-producing countries. In 2013, the largest 4C coffee areas were in Brazil (almost 0.7 million hectares), Colombia (0.3 million hectares), Viet Nam (almost 157,000 hectares), Peru (97,000 hectares) and Honduras (48,000 hectares). These five countries represented more than 89% of the total 4C Association coffee area. Since 2008, the 4C Association coffee area has increased by almost 600%.

Fairtrade International certified more than 880,000 hectares of coffee in 2013, constituting almost 9% of the global coffee area. Almost 400,000 metric tons were produced. The largest Fairtrade International coffee areas were in the United Republic of Tanzania (149,300 hectares), Ethiopia (148,000 hectares), Peru (142,000 hectares), Colombia (121,000 hectares) and Mexico (almost 114,000 hectares). Together, these five countries represented 77% of the total Fairtrade International coffee area. Since 2011, the Fairtrade International coffee area increased by 20%.

For **Organic**, the estimated harvested area represented 6.3% of the global coffee area, more than 638,000 hectares. FiBL estimates that more than 260,000 metric tons were produced in 2013. The countries with the largest organic coffee areas were Mexico (220,000 hectares), Ethiopia (133,000 hectares), Peru (99,500 hectares), Indonesia (33,000 hectares) and Timor-Leste (22,000 hectares), which together represented 79% of the total organic coffee area. The organic coffee area has increased by 50% since 2008.

Rainforest Alliance/SAN certified more than 433,000 hectares of coffee worldwide. Almost 455,000 metric tons of Rainforest Alliance/SAN coffee were reported in 2013, 5% of the global coffee production volume. The five largest Rainforest Alliance/SAN coffee areas represented almost 60% of the total Rainforest Alliance/SAN coffee area: Nicaragua (72,000 hectares), Brazil (almost 68,000 hectares), Peru (more than 43,000 hectares), El Salvador (41,100 hectares) and Colombia (more than 34,000 hectares). Since 2008, the Rainforest Alliance/SAN coffee area has almost tripled.

Almost 474,000 hectares of coffee were **UTZ Certified** certified in 2013, which is almost 5% of the total coffee area. Brazil has the largest UTZ Certified coffee area, with more than 108,000 hectares, followed by Viet Nam (almost 54,000 hectares), Uganda (48,500 hectares), Peru (almost 48,000 hectares), Honduras (46,000 hectares) and Colombia (almost 44,000 hectares). These six countries together represented 64% of the total UTZ Certified coffee area. Since 2008, the UTZ Certified coffee area has doubled (ITC, 2015).

The Domestic Environment

According to the public data available from the standard-setting organisations (table 4.4), there are five voluntary standards operating on coffee in Papua New Guinea: Organic, Fairtrade International, Rainforest Alliance, UTZ Certified and 4C.

Table 4.4: Baseline situation of coffee certification in PNG

Standard	Area Harvested (ha)	Production (MT)	Year
Organic	9,800	5,500	2011
	16,500	15,550	2013
Rainforest Alliance	1,518	1,224	2012
	4,178	2,604	2014
Utz Certified	2,008	1,461	2012
4C	4,319	4,073	2013
FairTrade	2,921	2,937	2014

Source: Adapted from IISD, 2014 and ITC, 2015

PNG also engaged with STARBUCKS C.A.F.E Practices²⁶. However, according to a 2011-2012 report prepared by Conservation International, the two farms enrolled in the program in Papua New Guinea were found to be non-compliant in 2011 and had the lowest score of any country verified that year²⁷. Overall, the level standard-compliant production of coffee in PNG is rather small. The state of sustainability initiatives review estimates it to be 8% of national coffee production in 2014 in Papua New Guinea (IISD, 2014). Importantly, out of the 15 largest coffee producers, PNG is the second lowest standard-compliant production after Ivory Coast (see table 4.5). Other reports indicate that around 5% of PNG coffee exports are differentiated coffees, including organic, Fair Trade, Rainforest Alliance, and UTZ certified (WB, 2015c; Giovannucci, 2009).

Table 4.5 : Standard-compliant production as a percentage of total national production for 15 largest coffee producers, 2012

	4C	Fair Trade	Organic	Rainforest Alliance	UTZ Certified	Adjusted Agregate*
Brazil	37.5%	1.9%	0.5%	3.3%	8.9%	41%
Vietnam	25.2%	-	-	1.5%	11.0%	30%
Colombia	56.9%	23.4%	1.0%	6.4%	17.1%	> 60%
Indonesia	-	5.2%	2.8%	2.3%	3.4%	11%
Peru	-	18.4%	18.5%	8.2%	17.5%	> 30%
Honduras	-	4.5%	5.1%	2.1%	18.2%	24%
Ethiopia	-	-	11.2%	0.4%	0.9%	10%
India	-	5.2%	0.4%	3.4%	10.0%	15%
Mexico	-	5.9%	16.4%	1.6%	2.9%	21%
Guatemala	-	-	2.6%	6.8%	6.9%	13%
Uganda	-	-	1.4%	2.0%	11.0%	11%
Nicaragua	-	17.9%	4.8%	8.2%	10.3%	33%
Costa Rica	-	24.4%	0.7%	13.2%	2.1%	32%

26 C.A.F.E. (Coffee and Farmer Equity) Practices ensures that Starbucks is sourcing sustainably grown and processed coffee by evaluating the economic, social and environmental aspects of coffee production. These aspects are measured against a defined set of criteria detailed in the C.A.F.E. Practices Generic and Smallholder Scorecards. They relies on SCS Global Services (SCS) to ensure the quality and integrity of the third-party verification process.

27 http://www.conservation.org/publications/Documents/2011_2012_Starbucks_CAFE_Practices_Country_Dashboards.pdf

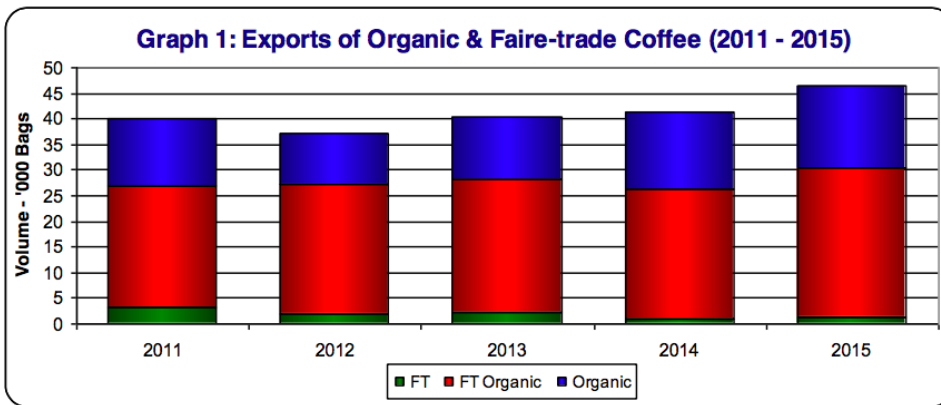
Ivory Coast	-	-	0.3%	0.1%	-	0%
Papua New Guinea	-	-	6.5%	1.4%	1.7%	8%

Source: Adapted from IISD, 2014

* All figures in the aggregate column are downward adjusted for multiple certifications, using the median between the minimum and maximum values (100 per cent and 0 per cent multiple certification levels, respectively). Red text signals intensities that have been adjusted using other means, based on the presence of suspected higher levels of double certification or suspected lower levels of double certification. For example, Colombia also houses significant volumes of double- and multiple-certified production (e.g., 72 per cent overlap in UTZ/Rainforest Alliance, 63 per cent UTZ/Fairtrade, and 9 per cent Organic/Fairtrade).

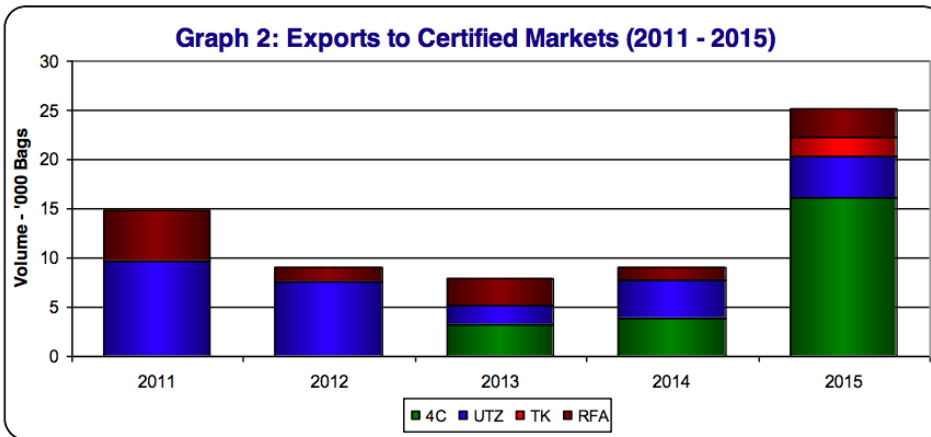
The data collected directly from the Coffee Industry Corporation does not match the data available from the standards system (see Figure 4.3 and 4.4)

Figure 4.3: Exports of Organic & Fair Trade Coffee (2011-2015)



Source: CIC export Records

Figure 4.4: Export to certified markets (2011-2015)



Source: CIC export records

Some of the key figures gathered from CIC 2015 export records are presented in table 4.6. Provided the data presented is correct, the total coffee certification for 2015 was amounting to 71,718 bags or 4,303 MT representing slightly less than 10% of the total coffee production. Organic & Fairtrade joint certification was the largest production, followed by 4C and organic. 6 exporters are engaged in coffee certification in PNG, with PNG Coffee export the largest exporter of certified coffee with 71,5% of the total production. Australia is the first export destination followed by Germany, both countries accounting for more than 90% of exports of certified coffee

from PNG.

Table 4.6: Status of Coffee Certification in PNG in 2015 (based on data provided by CIC)

	Number of 60Kg bags	MT	Exporters	Export Destination
All Coffee Certification	71,718	4,303	PNG Coffee Exports (PNGCE) 71,5% Monpi 17,1% Pacific Trading Company (PTC) 8,4% Kongo 2,5% New Guinea Highlands Coffee Exports (NGHCE) 0,4%	Australia 57% Germany 33.4% USA 2.8% Japan 2.8% Finland 2.5% Singapore 1.3% and Italy 0.02%
4C	16,200	972	PNGCE	Australia 78% Germany 22%
UTZ certified	640 3,520	38 211	Kongo (15%) Monpi (85%)	Germany 100%
Rainforest Alliance			PTC (73%) Monpi (27%)	Japan 24% Finland 22,1% Germany 22,1% USA 20,7% Singapore 11% Italy 0,2%
TK Conservation	1800 107	108 6	PNGCE (94%) NGHCE (6%)	Australia 94% USA 6%
Organic	15,971	958		
Fair trade	1,400	84		
Organic & Fair trade	29,179	1,751		

Irrespective of the data sources taken into consideration, many agree that **the potential for coffee certification in Papua New Guinea is much higher than its current level of production (i.e. between 5-10% of national production).**

In 2009, the Australian Centre for International Agricultural Research (ACIAR) commissioned a study on 'Assessing and extending schemes to enhance the profitability of the PNG coffee industry via price premiums for quality'. According to the report, given that much of the coffee in PNG is grown with minimal inputs and very much in sympathy with the environment, there are abundant opportunities for smallholders to pursue accreditation under Fairtrade, Organic, Rainforest Alliance or UTZ Certified (Batt et al, 2009)²⁸. For Giovannucci, PNG could significantly improve its position in higher value markets well beyond the current 5% of coffees exports that are differentiated. PNG's intrinsic production, processing and transport conditions mean that it is unlikely to be competitive in the provision of stock commodity-grade coffee. Instead, the best opportunities to improve PNG's competitiveness, as well as coffee sector incomes, may lie in the growing global trends toward differentiated goods. As such, priority should be given to quality and differentiation rather than the previous policy to focus on more production (Giovannucci & Hunt, 2009). Another interesting read is provided by the ex-Manager of Monpi Coffee Exports, and ex-Director of ECOM Sustainable Management Services on Papua New Guinea Coffee Potential²⁹.

28 Interestingly, the report also presents a detailed account of the processes of different certification options available for coffee farmers (e.g. CAFE Practices, Organic Certification, Fairtrade and 4C) and a case study of *Coffee Connections and the Emasa village cluster of Highlands Organic Agricultural Cooperative chain*. Coffee Connections being at that time the largest certified organic and the largest Fair Trade exporter in PNG. See Batt et al., 2009 for more information.

29 Joeri Kalwig. Papua New Guinea's Coffee Potential. 14 Jan 2016. <https://www.linkedin.com/pulse/papua-new-guineas-coffee->

“The country and its coffee must be a marketing Walhalla, a must-visit country on the bucket list of true coffee enthusiasts (...) why is it that we don’t see Papua New Guinea coffee prominently on the shelves of every coffee shop across the world? Okay, let’s forget for a minute that it produces less than 1% of the world’s coffee. Surely there are prominent spots to fill in the specialty and boutique markets? The seemingly exponential growth of the global demand for certified and specialty coffee should be an enormous stimulus for the country to increase supply for these markets”

For him, the future marketing potential of PNG coffee lies in the specialty and certified coffee market and while a few years ago the consensus amongst exporters and other coffee stakeholders on certification initiatives could be summarised as “too hard and too costly”, it is starting to change thanks to efforts such as SMS' capacity building work to prepare and guide coffee growers towards a certified status for one or more certification standards. SMS operates as the administrative link between Certification Standards and farming communities. These communities, the target group for whom the standards were written, are often faced with high levels of illiteracy, and certainly do not have the spare cash and resources to justify paying for expensive certification audits.

4.4 Cocoa

The International Environment

In 2015, cocoa was grown on more than 10 million hectares worldwide. This represented 0.2% of the global agricultural land. The largest producing countries were Côte d'Ivoire (2.5 million hectares), Indonesia (1.8 million hectares), Ghana (1.6 million hectares), Nigeria (almost 1.2 million hectares) and Brazil (almost 700,000 hectares). This represented 77.5% of the total cocoa area. In 2013, almost 5 million metric tons were produced worldwide.

Four Voluntary Sustainable Standards (VSS) – **Fairtrade International**, **Organic**, **Rainforest Alliance/SAN** and **UTZ Certified** – certify cocoa production.

Fairtrade International certified almost 449,000 hectares of cocoa in 2013, constituting 4.5% of the global cocoa area. More than 175,000 metric tons were produced, representing 3.8% of the global cocoa production volume. The countries with the largest cocoa area were Côte d'Ivoire (almost 174,000 hectares), Ghana (almost 147,000 hectares), the Dominican Republic (45,823 hectares), Peru (27,666 hectares) and Sierra Leone (6,281 hectares). These five countries combined represented 90% of the total Fairtrade International cocoa area. The Fairtrade International cocoa area has increased by 15% since 2011.

Organic cocoa represented 2.1% of the global cocoa area, or more than 208,000 hectares (estimated harvested area). An estimated 100,000 metric tons of cocoa were produced in 2013, almost 2.5% of the world's cocoa production. The Dominican Republic (107,700 hectares), Peru (19,200 hectares), Mexico (17,400 hectares), Uganda (14,500 hectares) and Ecuador (10,600 hectares) were the biggest organic cocoa producing countries, together representing 81.3% of the total organic cocoa area. Since 2008, the organic cocoa area has increased by 37%.

Rainforest Alliance/SAN certified more than 837,000 hectares. More than 500,000 metric tons of Rainforest Alliance/SAN cocoa were reported in 2013, or 12.5% of the global cocoa production volume, the highest share of the available VSS production volume data. The five countries with the largest cocoa area – Côte d'Ivoire (519,000 hectares), Ghana (almost 135,000 hectares), Indonesia (54,300 hectares), the Dominican Republic (almost 47,000 hectares) and Nigeria (over 23,000 hectares) – represented 93% of the total Rainforest Alliance/SAN cocoa area. The Rainforest Alliance/SAN cocoa area has increased 12-fold since 2009.

Almost 1.2 million hectares of cocoa were **UTZ Certified** certified in 2013, 12% of the total cocoa area. The countries with the largest cocoa area were Côte d'Ivoire (650,300 hectares), Ghana (239,600 hectares), Nigeria (53,400 hectares), the Dominican Republic (almost 49,000 hectares) and Indonesia (40,922 hectares), together representing almost 90% of the total UTZ Certified cocoa area. UTZ Certified reported a production volume of almost 0.7 million metric tons in 2013, almost 15.1% of the global cocoa production volume. Since 2010, the UTZ Certified cocoa area has increased sevenfold (ITC, 2015)

The Domestic Environment

Certification has been less of a concern in the cocoa sector than for palm oil or coffee in Papua New Guinea. However, certification is now becoming a much more important subject in the cocoa trade as well (see Annex 3). It is widely believed that by 2020 all cocoa bean products will be marketable only if they are certified under any of the certification labels currently known, such as Fair Trade, Rainforest Alliance, and UTZ Certified. This provides an important opening in Papua New Guinea to promote certification among cocoa growers and throughout the supply chain (WB, 2014c).

According to table 4.7, there are currently three voluntary standards certifying cocoa in PNG – Rainforest Alliance, Organic and Fair Trade International. Looking at the production from each of these standards, it appears that, as for coffee, a very low percentage of cocoa national production is currently certified (potentially as low as 5%). Those figures could not be cross-referenced at national level due to the non-availability of data.

Table 4.7: *Baseline situation of cocoa certification in PNG*

Standard	Area Harvested (ha)	Production (MT)	Year
Rainforest Alliance	2372	1295	2012
Organic	30	10	2013
Fairtrade International	349	185	2014

Source: IISD, 2014. ITC, 2015

As for coffee, the capacity of cocoa farmers to access certification in PNG is usually extremely limited. The existing certified cocoa farmers are usually supported by a range of organisations to access such international markets.

Ecom’s local joint-venture Monpi Coffee and Cocoa Exports established Monpi Sustainable Services (MSS) as its local agronomy division. It has several years of experience in extension work with coffee farmers and successful pilot projects in sustainable and certified coffee throughout PNG. In 2010, MSS with the support of the DOEN Foundation in the Netherlands, started an innovative program in cocoa. Since cocoa farmer organizations were virtually nonexistent in PNG, MSS started reaching out to farmers by establishing a network of cocoa nurseries as the starting point for improving cocoa production and developing relationships with farmers. Training videos were developed jointly with experts from MARS that are shown repeatedly at the nurseries and cocoa receiving stations (ECOM, 2011). MSS actively develops the capacity of cocoa farmers to increase yields, increase sustainability, develop and implement education programs and gain for farmers a broader market access. The MSS projects include eight large commercial nurseries producing high yielding clones. The clones ensure that farmers are planting trees that will return them a commercially viable yield. MSS supports cocoa farmers in accessing certification such as the Rainforest Alliance and Fair Trade³⁰. For example, Monpi cocoa exports supported 'Club 3000', a group of 629 cocoa farmers in Madang Province to receive Fair trade certification from Fair trade Australia & New Zealand:

'Club 3000's first shipment of Fairtrade Certified cocoa will be used for Cadbury Dairy Milk in Australia and New Zealand. Despite their challenges, Club 3000 farmers have a passion for growing cocoa. Thanks to their partnership with Monpi Cocoa Exports of Madang, who founded the group in 2011, they are improving their quality and productivity, learning better business skills, and are now able to sell their cocoa to the international Fairtrade market. Club 3000 has a long-term capacity building partnership with Fairtrade, with support from Fairtrade ANZ's Producer Development Fund through the New Zealand Aid Programme. It plans to produce 120 metric tonnes of Fairtrade Certified cocoa in 2014, which will generate US \$24,000 in Fairtrade Premium to be used for economic, social and environmental development projects to benefit the farmers, their families and their communities'³¹.

30 <http://www.ecomtrading.com/en/sustainability/sustainability-in-cocoa/selected-projects/papua-new-guinea.html?&back=1>

31

http://asia.ifad.org/web/png/home?p_p_id=1_WAR_ifad_newsportlet&_1_WAR_ifad_newsportlet_jspPage=%2Fvie_w_entry.jsp&_1_WAR_ifad_newsportlet_entryId=10205

4.5 Potential benefits from certification

While certification is only one of the tools to achieve sustainability for a commodity, it can come with a range of benefits at the production level.

Benefits for producers?

By implementing the Production Principles and Criteria promoted by VSS, and being supported accordingly in terms of training, producers can be economically better-off due to either access to premium prices and/or reduced input costs while achieving equal or increased yields. In addition to the direct economic benefits to farmers involved in more sustainable practices, a range of other benefits are also possible to achieve for producers and their communities such as:

- *higher quality standards* (e.g. greater and more consistent quality);
- *Empowering farmers through the strengthening of producer organisations*. Through such organisations, farmers can advocate and negotiate more effectively, as well as better participate in policy and decision making processes. Producer organisation is also the foundation for sharing and improving collective knowledge, business skills and resources.
- *Meeting market demand and establishing closer links to their end market*;
- *Better access to affordable finance*. Being part of a certification scheme can help producers access affordable forms of financing through local banks and micro-finance institutions;
- *Long-term sustainability of agricultural activity (soil fertility, environmental health)*. Many standards have criteria to help farmers maintain and build the fertility of the soil over time, which in turn has positive impacts on the health of the environment in the communities and ensures high yield and productivity over long-term. An emphasis on promoting management practices that aim to conserve soil fertility has several positive implications: improved yield; reduced accumulation of toxics/heavy metals in the farming environment; higher organic content of soil; reduced water-logging/salinisation; and vitally, the increased sustainability of agricultural activity – the opportunity for farmers to hand over a farm to their children which can still be farmed productively;
- *Improved health conditions for farmers/workers and the family/community*. Through the adoption of principles such as reduced use of pesticides, correct storage of farm chemicals, handling of pesticide washing, disposal of empty chemicals containers, etc.
- *Access to information* allowing farmers to improve management of their business;
- *Ensuring Free and Prior Informed consent (FPIC)* between investors and customary law communities prior to oil palm estates, timber plantations or other enterprises being established and developed on their customary lands (e.g. a key principle in RSPO).

A number of study exist to document these potential benefits across different commodities. For example, ICCO indicates that higher prices obtained through cocoa certification, enhanced bargaining power at the cooperative level and increases in yields can positively impact farmers' income. Impacts are also observed on the community level with better working conditions, increased numbers of children attending schools and overall positive impacts in livelihoods (ICCO, 2012). Similarly, one of the largest impact studies conducted by the Committee on Sustainability Assessment (COSA) on coffee and cocoa certification indicates that, on balance, farms that are part of a sustainability initiatives are experiencing better economic performance compared to conventional and uncertified control farms. Average net income per hectare, the single best measure of farm-level economic viability, was higher across many of the major certification initiatives observed, but not by very large margins. Higher income is typically driven by multiple factors: higher yields, lower costs of production and occasionally, higher prices. Farmers participating in initiatives promoting sustainability tend to have more training and more diverse training on a variety of topics such as good agricultural practices and environmental stewardship. The perception of producers in terms of their social situation, economic situation, and environmental situation was consistently higher for producers that were part of an initiative (COSA, 2013).

WWF in their report on profitability and sustainability in palm oil production looked at the impact of RSPO certification on the business bottom line. According to the report, the primary costs of certification are the identification and management of High Conservation Value area; the audit and certification process; engaging smallholders and segregation costs. The primary benefits includes the reduction of social conflicts; operational improvement through documentation and better management practices; improved staff moral and reduced labor turnover; revenues and market access; access to capital. The research found that although potential market premiums served as the initial attraction to certification, each major category of benefits was, in and of itself, potentially capable of outweighing RSPO implementation costs. In summary, business benefits gained from adopting the RSPO Principles and Criteria typically outweigh the costs of implementation— in many cases significantly— yet often through unexpected and indirect channels (WWF, 2012).

Benefits for the environment - Link with Deforestation?

In order to prevent any agricultural expansion that could negatively impact the landscape and to reduce environmental risks, standards systems will normally outline a number of conditions for expansion to happen, including conducting environmental impact assessments.

For instance, the RSPO New Planting Procedure (NPP)³² consists of a set of assessments and verification activities to be conducted by growers and certification bodies (CB) prior to a new oil palm development, in order to help guide responsible planting. The NPP applies to any development of new plantings, regardless of size (ha). The intention is that new oil palm plantings will not negatively impact primary forest, High Conservation Values (HCV), high carbon stocks (HCS), fragile and marginal soils or local people's lands. One of the outputs of the NPP is a report that proposes how and where new oil palm plantings should proceed, or not, for a given management area. The NPP report is posted on the RSPO website for public consultation for a duration of 30 days. Planting and any associated development (such as road development) can only begin once the NPP is completed and RSPO approval is granted (RSPO website). Standards systems include content in their standards that address a range of issues that have implications for the broader landscape in which certified enterprises operate. Standards may include criteria to ensure that primary forest or high conservation value (HCV) areas are not harvested or converted. For this purpose standards set cut off dates, after which time conversion of land conversion cannot take place. For most standards systems, the cut-off date ranges between 2005 and 2009. The Forest Stewardship Council (FSC) is the exception, with a 1994 cut-off. Requirements to show compliance with cut-off dates typically ask for HCV maps, land use maps or even historical remote sensing imagery. In some cases, if land was converted prior to the cut-off date, restoration plans are requested. For example the Sustainable Agriculture Network (SAN) standard requires that if any natural ecosystems were destroyed because of farm management activities between 1999 and 2005, which is their cut-off date, the farm must carry out an analysis and implement a series of mitigating actions.

RSPO aims to limit forest conversion by laying out a process for defining where deforestation is prohibited. It relies on FPIC and HCV³³ as cornerstones of the approach to ensure forest conversion is limited to areas where critical values are lacking, and where community rights have been respected. Some of RSPO's relevant criteria in the context of deforestation are presented in table 4.8.

32 RSPO's detailed procedures for new oil palm planting are available here: <http://www.rspo.org/certification/new-planting-procedures>

33 Detailed information on HCV approach and how to conduct an HCV assessment can be found here <https://www.hcvnetwork.org/>

Table 4.8: Examples of RSPO Principles and Criteria³⁴³⁵

Principle 5: Environmental responsibility and conservation of natural resources and biodiversity	Principle 7: Responsible Development of new plantings
5.1 Aspects of plantation and mill management, including replanting, that have environmental impacts are identified, and plans to mitigate the negative impacts and promote the positive ones are made, implemented and monitored, to demonstrate continual improvement.	7.1 A comprehensive and participatory independent social and environmental impact assessment is undertaken prior to establishing new plantings or operations, or expanding existing ones, and the results incorporated into planning, management and operations.
5.2 The status of rare, threatened or endangered species and other High Conservation Value habitats, if any, that exist in the plantation or that could be affected by plantation or mill management, shall be identified and operations managed to best ensure that they are maintained and/or enhanced.	7.2 Soil surveys and topographic information are used for site planning in the establishment of new plantings, and the results are incorporated into plans and operations.
5.3 Waste is reduced, recycled, re-used and disposed of in an environmentally and socially responsible manner	7.3 New plantings since November 2005 have not replaced primary forest or any area required to maintain or enhance one or more High Conservation Values.
5.4 Efficiency of fossil fuel use and the use of renewable energy is optimised.	7.4 Extensive planting on steep terrain, and/or marginal and fragile soils, including peat, is avoided.
5.5 Use of fire for preparing land or replanting is avoided, except in specific situations as identified in the ASEAN guidelines or other regional best practice.	7.5 No new plantings are established on local peoples' land where it can be demonstrated that there are legal, customary or user rights, without their free, prior and informed consent. This is dealt with through a documented system that enables these and other stakeholders to express their views through their own representative institutions.
5.6 Plans to reduce pollution and emissions, including greenhouse gases, are developed, implemented and monitored.	7.6 Where it can be demonstrated that local peoples have legal, customary or user rights, they are compensated for any agreed land acquisitions and relinquishment of rights, subject to their free, prior and informed consent and negotiated agreements.

Source: RSPO Website

34 The Complete Production Principles and Criteria and associated guidance can be found here: <http://www.rspo.org/resources/key-documents/certification/rspo-principles-and-criteria>

35 Since countries differ in their laws for the same criteria, such as minimum wages for workers for example, and there are cultural and other differences, the RSPO Principles & Criteria are further adapted for use by each country through National Interpretations PNG National Interpretations document can be found here : <http://www.rspo.org/certification/national-interpretations>

4.6 Key challenges for certification in PNG

This last section presents an overview of some of the key challenges specific to certification in the context of Papua New Guinea.

- **Cost of certification**

The costs associated with certification are often the first topic discussed when it comes to challenges especially in the context of smallholders. Organic certification, for example, takes 3 years of continuous effort. Throughout this period, the costs for auditing and inspection must be met even although no premiums are being received. While Fairtrade certification can theoretically occur within around 3 months, the preliminary work required to establish an effective cooperative and to have processes in place to achieve certification means considerably more time is required. Most smallholders do not have the financial resources, human capital or social cohesion to deal successfully with these issues. Consequently, the support of an outside agency is required for a considerable time to achieve these ends. In the context of coffee and cocoa, the most likely source of support is from a committed exporter with the appropriate cultural understanding and patience. However, the exporter and growers need to develop a considerable level of trust for the relationship to be successful and exporters may not be keen to invest the time and effort required to achieve certification with a grower group given the probability that the growers may sell their parchment elsewhere (Batt et al, 2009). According to the World Bank, PPAP baseline survey indicates that 13% of households claim to have any knowledge of certification (2% "strong" knowledge). This is highly concentrated in provinces where exporters work. Around 8% reported having certification for their coffee, and, of these, 1/2 expressed little or no interest in continuing. Half of the households surveyed were not interested in paying for certification, a finding which suggests, according to the baseline survey, that the benefits of certification are not sufficient to justify paying for it (WB, 2014).

The cost of certification is, however, not really an issue for an organisation like NBPOL as sustainability is part of their business model and the way in which they compete in the international market.

An important point to add regarding the cost of certification is the auditor capacity in the country. At the moment, all auditors for coffee, cocoa and palm oil certification schemes are coming from outside (e.g. Australia) which is increasing significantly the cost of audits. In that respect, having a pool of locally trained auditors for the different standards could reduce the cost of certification visits.

- **Low capacity to address certification**

Beyond existing certified operations (e.g. NBPOL, HOPL, Monpi coffee exports, etc.) the capacity to work with certification is usually limited at different levels. The majority of smallholders usually do not have the capacity, incentive or resources to adopt costly or complex management practices. Literacy levels are usually low. Certification is labour intensive and requires lots of effort, and attention. Training is required for farmers to reach the necessary standards. However, support services for producers' capacity building are often lacking. Government capacity is also limited due to limited knowledge of the options available, cost / benefits analysis, or what is the business case to engage in certification. Such information is needed to support policy making. Giovannucci mentioned that any future coffee sector strategy should consider the establishment of a 'Sustainability Management Plan' that will make information available on many sustainability options and show the actual costs and benefits of adopting various sustainability initiatives such as Organic, Fair Trade or Rainforest Alliance. It is important to facilitate the necessary sector capacity regarding the pros and cons of different initiatives; the adaptation processes; and certification issues in order to improve stakeholder decision making and reduce the costs of adopting sustainability approaches (Giovannucci, 2009).

- **Lack of effective producer organisations**

For certification to work in the context of cocoa or coffee smallholders, growers must first be mobilised into collaborative marketing groups and linked directly to an exporter who is willing to assist. The establishment of such cooperatives have been challenging in the context of Papua New Guinea and to facilitate the long term sustainability of these groups, on-going support and training in business management, leadership and quality management will be required. Considerable time, cost and support are required to establish and maintain the group. Leadership is critical and needs to come from the growers themselves rather than be imposed from outside (Batt et al, 2009). Giovannucci similarly argues that in PNG, the challenge to accessing standards like Fairtrade is presented by producer group structures. There is no history or tradition of functioning organised small farmer organizations. Any existing cooperative structures are weak, leadership and management skills are poor and are combined with governance issues stemming from a lack of accountability and trust. Coffee farming communities in PNG have no access to finance, business or management skills. They are also characterised by their remote locations and farmer cooperatives often consist of a number of villages and clans with geographical challenges not only in getting their product to market but also in organising meetings of their members. Often there is conflict between clans and villages and the concept of democratic organizations is not necessarily applicable to these existing social structures (Giovannucci, 2009).

- **Poor market access infrastructure**

Another major issue in PNG is the poor infrastructure. There is a great need to provide or rehabilitate critical infrastructure, particularly market access roads. Improved infrastructure will reduce the cost of marketing, may improve quality and increase participation in the market. Access offers other socio-economic benefits not limited to marketing other crops. Access to schools and healthcare are among the corollary advantages.

- **Inappropriate policy environment**

Certification, while recognised by many stakeholders as key to maintain PNG's competitiveness in the future, is not appropriately reflected into government implementation or existing commodity support development projects. While STARS mention the certification of sustainable production and trade as a key green growth policy instruments, it is not yet translated into the Medium Term Development Planning. Similarly, The Productive Partnership in Agriculture Project is not really focusing on certification despite its level of funding and relevance for the country. The component of the project to 'strengthen quality and promote, where appropriate, the adoption of certified sustainability practices in the two industries' has not been implemented as per the initial plan. While the PPAP results framework had in the original project document the following indicators: 'Percentage of coffee with sustainability certification exported from PNG by volume and value' this indicator has been dropped in the project document revised in 2014 probably due to slow progress on this component (WB, 2014b). Interview with PPAP staff indicates that while certification is part of the project activities, no real strategies have yet being developed. The cost of certification is one of the biggest drawbacks, it is often too labour intensive and the capacity of extension services to do certification is too low (PPAP staff, personal communication March 2016).

5. THE BUSINESS CASE FOR SUSTAINABLE COMMODITIES

Key Findings

- The palm oil supply chain is facing unprecedented scrutiny from governments, regulators, NGOs, investors, and consumers regarding how its practices impact the environment and the wider world. Political and corporate momentum is accelerating.
- The Consumer Goods Forum (a global consortium of over 400 companies with a turnover of 2,5 Trillion USD employing more than 10 million people) have pledged to zero net deforestation through their supply chain by 2020.
- As the signal from purchasers has strengthened, growers and traders have made their own commitments. Companies that account for 90% of global trade in palm oil have committed to no deforestation in their supply chain policies (e.g. Unilever, Nestle, Wilmar, Cargill, etc.)
- The Amsterdam Declaration was recently signed by 5 governments in the EU (Denmark, France, Germany, Netherlands, UK) to ensure that by 2020, 100% of Palm oil entering their countries is from sustainable sources. The Netherlands, UK and Germany and the largest purchasers of palm oil products from PNG.
- Business as usual is no longer an option for producers, companies or government wanting to remain competitive. Most likely, investors, buyers, traders and ultimately China and India will all converge around the concepts of sustainability and traceability.
- **PNG should position itself as a global leader for sustainable oil palm production.** Such positioning could represent an important win-win scenario for the government as:
 - It is fully aligned with its long-term strategy as formulated in STaRS and its associated Green Growth Framework;
 - It is fully aligned with the corporate and political momentum for traceable, sustainable and deforestation-free palm oil;
 - It will help the government remain competitive, maintain access to premium markets and secure foreign exchange;
 - it will support poverty reduction and safeguards social interests, communities and workers;
 - It will help protect the environment, reduce forest loss and associated emissions;
 - It will facilitate access to REDD+ financing.

5.1 Introduction

The ISEAL Alliance, the global membership association for sustainability standards, recently looked at the business case of sustainability standards by interviewing key company sourcing directors, sustainability heads and other experts. They found the value of certification to be high but it varied depending on the type of business, geography, sector or other factors. Market differentiation or increased sales were not mentioned as the only reasons to engage in certification. Rather, they found that some of the highest values were found in reducing supply chain challenges and risks, making a complex supply chain more understandable, providing better traceability, providing a way to engage more deeply with employees or reflecting a company's values and heritage. While certification is not seen as a silver bullet, companies' commitment to certification will only deepen over time (ISEAL, 2015). The table below presents insightful quotes from some of the largest companies involved in coffee, cocoa and palm oil certification.

Table 5.1: The Business Case of sustainability standards – Stories from Companies

Company	Background	Quotes
MARS (Cocoa)	In 2009, Mars made a public commitment that its entire cocoa supply would be produced in a sustainable manner by 2020. The move has been a game changer, forcing all intermediaries to get involved and challenging others in the industry on their ambition levels.	<i>"For us, certification offers something unique, an opportunity to scale across the industry and drive change beyond the Mars supply chain. This supports our commercial need to secure a long term supply of cocoa but at the same time leads to improved income and better quality of life for farmers, their families and their communities."</i> Alastair Child, Cocoa Sustainability Director, Mars Global Chocolate
M&S (Coffee, Cocoa, Palm Oil, other commodities)	M&S launched Plan A in January 2007, setting 100 social and environment commitments to achieve in 5 years. They've now introduced Plan A 2020 which consists of 100 new, revised and existing commitments, with the ultimate goal of becoming the world's most sustainable major retailer.	<i>"We think about the risks to our sourcing strategy and brand reputation in 10, 20 years, and how we can have less risk in the future. We also want to have a story to tell about the many years we have been doing this. Therefore, the steps we have taken to engage with and even to build certification systems, and to support improvements on the ground, are all part of developing an M&S heritage"</i> Fiona Wheatley, Plan A Sustainable Development Manager
IKEA (Coffee, Cocoa, Palm Oil, Other commodities)	With sustainability becoming an integral part of every aspect of IKEA, the business has chosen to source many of its raw materials from farms or forests certified by a range of sustainability standards. Much of its timber is Forestry Stewardship Council (FSC) certified, many of its furniture and cotton ranges are sourced to Better Cotton Initiative (BCI) standards, 100% of the palm oil in its candles is	<i>"We have set targets for markets where we perceive real sustainability challenges. China is one of those markets and we have set a target of sourcing 100% FSC certified or recycled timber by 2017. By setting ambitious targets we will contribute strongly to sustainability in this region, more so than in less challenging markets where there is good governance, high forest management standards and control of corruption. We are actively supporting FSC certification on the ground and working with</i>

	Roundtable for Sustainable Palm Oil (RSPO) segregated with full traceability back to mills, the coffee as well as the cocoa in chocolate bars is UTZ Certified.	supply chains to increase the availability of sustainably sourced timber”. Anders Hildeman, IKEA's Global Forestry Manager
WILMAR (Palm Oil)	Wilmar International Ltd. – one of the world’s top palm oil producers and traders was one of the first companies to join the Roundtable for Sustainable Palm Oil (RSPO). By the end of 2014, two thirds of Wilmar’s mills and plantations had been certified under the RSPO standard and the company was working toward a goal of getting all of its operations RSPO certified by the end of 2016.	“RSPO certification has already improved the company’s market position. Wilmar’s ability to deliver CSPO has resulted in better long-term contracts, helped the company to keep customers, and helped it get new customers, though it doesn’t always mean a better price”. Jeremy Goon, Wilmar’s Chief Sustainability Officer
WOOLWORTHS (Coffee, Cocoa , Palm Oil, and other commodities)	The South African retailer program to make the company more environmentally and socially sustainable “Good Business Journey” include coffee, cocoa and palm oil certification as well as other commodities. For example, there has been a 40% increase in sales of Woolworths' boxed chocolate since the UTZ certified chocolate line was launched.	“What we’re trying to do is to embed sustainability into the way we do business. A combination of factors is driving this change. We have a highly educated customer base that expects a lot of us, but we are also using sustainability standards to deliver cost savings, to help us address our supply chain risks, and ensure transparency. Our customers play a big role, but they aren’t the only reason we’re doing this. Traceability and transparency are an important part of this”. Lucy King, Woolworths Good Business Journey Analyst

Source: Adapted from ISEAL, 2015

Similarly, Business for Social Responsibility (BSR) looked at how supply chain sustainability create business value. While the business case depends on a number of factors (e.g. sector, region, business strategy, past performance and organisation culture) there are a number of opportunities to be seized. Some of the key benefits of sustainable supply chain for business are presented in the table below.

Table 5.2: Key benefits of supply chain sustainability for business.

Managing Risks	Realizing Efficiencies	Creating Sustainable Products	Building a culture of Responsibility
Minimize business disruption from environmental or labor problems; Protect company's reputation and brand value; Gain greater access to capital, financing, and insurance.	Reduce cost of material inputs, energy, transportation; Increase labor productivity; Develop strategic supplier relationships for optimization.	Innovate to meet evolving customer and business partner requirements; Gain access to new markets; Increase pricing power; Improve customer loyalty.	Attract and retain engaged employees; Build strong relationships with external stakeholders including government; Gain greater access to capital, financing, and insurance.

Source: BSR, 2010

5.2 The Example of Palm Oil and deforestation

In recent years, many stakeholders have recognized that the palm oil industry must address the social and environmental impacts associated with its irresponsible practices. In 2003, the Roundtable on Sustainable Palm Oil (RSPO) held its first meeting. The RSPO has made progress on sustainability, but due to the wide variety of stakeholders, the group has had difficulty reaching consensus on standards for the protection of all tropical forests and peatlands. As a result, palm oil certified by the RSPO is more sustainable than conventional palm oil but is not deforestation-free and peat-free. Deficiencies in the RSPO standard have led consumers and nongovernmental organizations (NGOs) to call on companies that use palm oil to go beyond RSPO-certified palm oil to ensure their products are deforestation-free and peat-free. Nestlé and Unilever were two of the first companies to make deforestation-free, peat-free palm oil commitments as a result of consumer pressure and campaigns. Other companies followed their lead, making palm oil commitments of their own (UCS, 2015).

The **Consumer Goods Forum (CGF)** is a global, parity-based industry network driven by its members. It brings together the CEOs and senior management of over 400 retailers, manufacturers, service providers and other stakeholders across 70 countries and reflects the diversity of the industry in geography, size, product category and format. Forum member companies have combined sales of USD 2.8 trillion, and employ nearly 10 million people with a further 90 million related jobs estimated along the value chain (CGF website). In 2010, the CGF's Board of Directors agreed the following resolution on deforestation with the aim of achieving 'zero-net deforestation'³⁶ by 2020: *"As the Board of The Consumer Goods Forum, we pledge to mobilise resources within our respective businesses to help achieve zero net deforestation by 2020. We will achieve this both by individual company initiatives and by working collectively in partnership with governments and NGOs. Together we will develop specific, time bound and cost effective action plans for the different challenges in sourcing commodities like palm oil, soya, beef, paper and board in a sustainable fashion. We will also work with other stakeholders – NGOs, development*

36 The CGF follows the WWF definition of zero net deforestation. "Zero net deforestation" can be distinguished from "zero deforestation", which means no deforestation anywhere. It acknowledges that some forest loss could be offset by forest restoration. Zero net deforestation is not synonymous with a total prohibition on forest clearing. Rather, it leaves room for change in the configuration of the land- use mosaic, provided the net quantity, quality and carbon density of forests is maintained. It recognises that, in some circumstances, conversion of forests in one site may contribute to the sustainable development and conservation of the wider landscape (e.g. reducing livestock grazing in a protected area may require conversion of forest areas in the buffer zone to provide farmland to local communities). However, zero net deforestation is not achieved through the conversion of primary or natural forests into fast growing plantations. Such conversion would count as deforestation in assessing progress against the target.

banks, governments etc – to create funding mechanisms and other practical schemes that will incentivise and assist forested countries to conserve their natural assets and enable them to achieve the goal of zero net deforestation, whilst at the same time meeting their goals for economic development" (CGF website)

The CGF accordingly developed in 2015 its *Sustainable Palm Oil Sourcing Guidelines* intended to assist companies in the development of their own policies for effectively sourcing palm oil. The guidelines indicate that palm oil, palm kernel oil and palm oil derivatives should be sourced from plantations and farms that operate in compliance with all laws and regulations and additionally should ensure the following requirements are met:

- Comply with existing RSPO Principles & Criteria, or equivalent standards (e.g. Rainforest Alliance/SAN);
- Protect high conservation value (HCV) areas;
- Involve no burning in the preparation of new plantings, re- plantings or any other developments, including the management of existing plantations;
- Respect human rights, and endorse and support the Universal Declaration of Human Rights;
- Engage in free prior and informed consent of indigenous and local communities concerning activities on their customary lands where plantations are planned for development;
- Operate an open, transparent and consultative process to resolve complaints and conflicts.

In addition, producers should consider developing an approach for addressing the following criteria which go beyond current RSPO certification standards:

- Protect high carbon stock (HCS) forests; and
- Do not establish new developments on peatlands regardless of depth (CGF, 2015)

So far, the commitments made from private sector members of the CGF have varied significantly between fast movers and others. Nonetheless, they have sent a strong signal to the market about future demand for sustainably sourced agricultural commodities. As this signal from the purchasers has strengthened, there has been significant movement from the growers and traders of agricultural commodities too. Major companies like Wilmar, Golden Agri Resources (GAR), Cargill³⁷ and Musim Mas³⁸ have all committed to no-deforestation policies, which now cover over 90% of globally traded palm oil. To illustrate this growing momentum, the sourcing commitments made by Unilever and Wilmar, two of the largest companies operating in the palm oil supply chain are presented below.

Unilever is one of the world's major buyers of palm oil for use in products such as margarine, ice cream, soap and shampoo. It purchases around 1.5 million tonnes of Palm Oil and its derivatives annually, which represents about 3% of the world's total production. The company was a founder member of the RSPO and co-chair the CGF Steering Group on Sustainability. Unilever's Sustainable Palm Oil Sourcing Policy has three key commitments: halt deforestation, protect peat lands and drive positive impact for people and local communities. In 2012, they announced that they would reach their 2015 target to source 100% of palm oil from sustainable sources three years ahead of schedule. However, this was achieved primarily through the purchase of controversial GreenPalm certificates. Recognising that this was only a first step, in 2013, they made a commitment to source all the palm oil they use from traceable and certified sources by 2020³⁹. Their interim progress report showed that in September 2014, 58% of palm oil in their supply chain was traceable to known mills. According to their website, by the end of 2014 this increased to 70% and by the end of March 2015, all of the palm oil they buy directly for their

37 https://www.cargill.com/wcm/groups/public/@ccom/documents/document/palm_oil_policy_statement.pdf

38 <http://www.musimmas.com/news/general-news/2014/musim-mas-affirms-its-commitment-to-sustainability>

39 Unilever's journey to 100% sustainable palm oil is available in infographic here https://www.unilever.com/Images/uslp-palm-oil-timeline-nov-2014_tcm244-424240_en.pdf

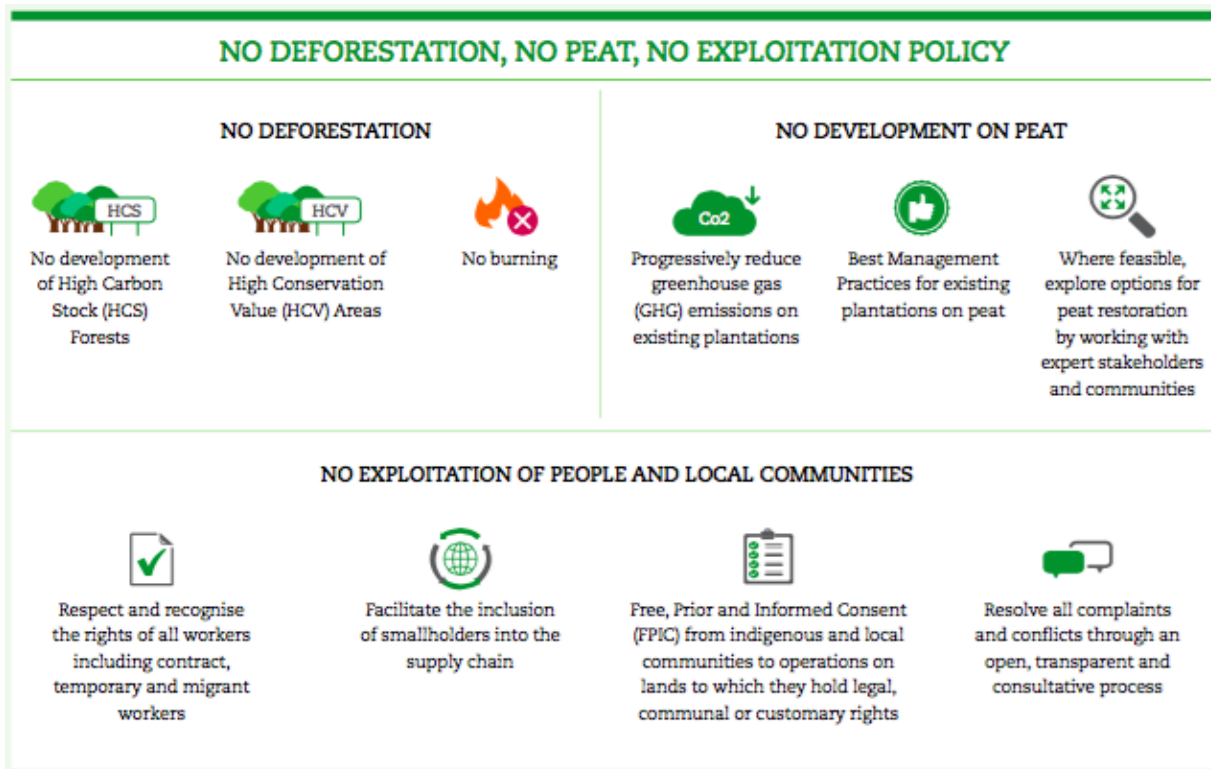
European Foods business was traceable to certified plantations.

Wilmar, the world's largest palm oil trader (and a key supplier to Unilever) made in December 2013 a commitment to drive sustainable practices and accelerate transformation in the palm oil industry by announcing a 'no deforestation, no peat, no exploitation policy' (See Figure 5.1). This integrated policy extends across Wilmar's entire supply chain, including their joint ventures and third-party suppliers.

This development was significant because Wilmar's market share constitutes 44 % of global palm oil supplies, which lends the company considerable influence to change industry practices. Additionally, Wilmar's actions signaled to palm oil buyers further up the supply chain that in the future there will be a supply of palm oil meeting the deforestation-free and peat-free standards that consumers are demanding (UCS, 2015).

Figure 5.1: Wilmar's Integrated Policy on Sustainable Palm Oil

Source: Wilmar (2015)
Corporate commitments only tell one part of the story. Just as important are



the roles of government and civil society. To get to scale, business action needs to be aligned with public policy, through partnership and collaboration.

One such example is the **Tropical Forest Alliance (TFA) 2020** founded in 2012 at Rio+20 after the CGF commitment to zero net deforestation. The CGF partnered with the US government to create the public-private alliance with the mission of mobilizing all actors to collaborate in reducing commodity-driven tropical deforestation. The Tropical Forest Alliance Secretariat is hosted at the World Economic Forum offices in Geneva, with financial support of the governments of the Norway and United Kingdom. The alliance now consists of 68 partners including eight governments (Indonesia, US, UK, Norway, Ghana, Ivory Coast, Liberia and The Netherlands), 27 private sector companies (e.g. Unilever, Wilmar, Cargill, Wal-Mart, etc.) and 33 non-governmental organisations and institutions (e.g. Conservation International, WWF, Rainforest Alliance, etc.). Its first General Assembly was conducted in Jakarta on 10-11 March 2016 in order to finalise their 2016-2018 strategy, and exchange knowledge, expertise and best practices on partnering to implement the transition to deforestation-free supply chains (TFA 2020 website).

In December 2015, five governments in the European Union (Denmark, France, Germany,

Netherlands, UK) signed the **Amsterdam Declaration**, committing to support efforts by the industry to ensure that by 2020, 100% of palm oil entering their countries will be from sustainable sources⁴⁰. In Indonesia, commodity traders Wilmar, GAR, Cargill, Asian Agri and Musim Mas stated their intent to “find solutions for sustainable palm oil that is deforestation-free, respects human and community rights, and delivers shareholder value” by signing the **Indonesia Palm Oil Pledge (IPOP)** in September 2014, together with the Indonesian Chamber of Commerce Kadin. Together, IPOP signatories control between 60- 90% of Indonesia’s palm oil exports(TFA, 2016).

In Indonesia, the Ministry of Agriculture is also leading the **Indonesia Palm Oil Platform (InPOP)**⁴¹, a multi-stakeholder dialogue pioneered by the UNDP's Green Commodities Program (GCP) aimed at finding concrete solutions to the sustainability challenges in Indonesia’s palm oil supply chain. InPOP provides an open and transparent forum for all palm oil sector stakeholders - the government, the private sector, farmer communities, financial institutions and civil society – to agree and act on a common agenda that will maximise palm oil productivity while mitigating the negative environmental impacts. Since InPOP’s launch in October 2014 four technical working groups have been established that focus on: smallholder capacity, the environment, governance and the Indonesian Sustainable Palm Oil (ISPO) scheme. Due to its relevance for PNG, more information on the Indonesia Palm Oil Platform can be found in Annex 4. Increasingly ambitious private sector and government commitments to tackling deforestation culminated in the **New York Declaration on Forests**, launched at the UN Climate Summit in 2014. For the first time, world leaders endorsed a global timeline to halve natural forest loss by 2020, end it by 2030 and to restore 350 million hectares of degraded land, an area larger than India.

The shift in the commitments of leading traders established a new benchmark for palm oil production and trading; it also made clear that business as usual was no longer an option for companies wanting to remain competitive (UCS, 2015).

Nonetheless, while a small group of companies are following ambitious commitments with tangible action to switch to sustainable palm oil, others are still lagging well behind. In that regard, civil society organisations are at the forefront in assessing companies' commitments and their efforts have been key factors in encouraging actors along the supply chain to accelerate their commitments to sustainable palm oil sourcing.

WWF publishes regularly scorecards that assess the performance of retailers and consumer goods manufacturers highlighting their commitments to, and actions on, the responsible purchasing of palm oil. According to their latest scorecards, 'The volume of RSPO- Certified Sustainable Palm Oil (CSPO) being produced worldwide has increased from 1.3 million tonnes in 2009 and 4.8 million tonnes in 2011 to 8.2 million tonnes in 2013. But still only 52 per cent of this gets bought. There is no excuse for not using 100 per cent CSPO. Of the retailers surveyed, 39 out of 52 are using some CSPO and 21 are using 100 per cent, or covering all their palm oil use with, CSPO. Among manufacturers, 60 out of 78 are using CSPO but only 25 cover all their palm oil needs with it. With the amount of CSPO available, there is absolutely no reason why any company shouldn't be at 100 per cent' (WWF, 2013). Furthermore, it is clear that companies need to be moving towards segregated supply chains. Even companies that are achieving 100% CSPO rely heavily on the Book and Claim certificate trading system, which does not guarantee that they aren't using palm oil from unacceptable sources (WWF, 2013).

Greenpeace has also published a producer scorecard, assessing the performance of eleven of the world's major palm oil producers based on three main criteria: Commitment to stopping deforestation, no development on peatland and percentage of RSPO certified palm oil production. Of particular interest to this report New Britain Palm Oil Limited ranked as the 2nd best performer

40 <http://www.euandgvc.nl/documents/publications/2015/december/7/declarations-palm-oil>

41 <http://www.id.undp.org/content/dam/indonesia/2015/spo-project/document/UNDPNewsLetter.pdf>

out the 11 producers (Greenpeace, 2012).

A more recent report prepared by the **Union of Concerned Scientists** scores America's top brands on their palm oil commitments. According to the report 32 of 40 largest companies in the US do not have adequate commitments to ensure that in the future they will be able to transparently show that their palm oil can be traced to land not obtained by clearing forests or draining peatlands. Moreover, all companies, even those with strong policies, still have a tremendous amount of work ahead to fulfill their palm oil commitments. Until companies actually implement their palm oil commitments and start making changes on the ground, critically important forests, wildlife, and local communities will remain at risk from expanding oil palm plantations (UCS, 2015).

Another organisation holding companies, investors and government accountable for their actions is **The Forest 500**, the world's first rainforest rating agency. It identifies and ranks the most influential companies, investors and governments in the race towards a deforestation-free global economy. The results and insights from the Forest 500 indicate shortcomings and gaps in powerbrokers' commitments, highlighting where greater action is required to achieve overarching deforestation commitments. Specifically, the Forest 500 assesses 250 companies, 150 investors and lenders, 50 jurisdictions, and 50 other powerbrokers, each selected based on their exposure to forest risk commodity supply chains (Forest 500 website).

While some companies are performing well, the average score of 29 out of 100 raises concerns about the progress being made by key corporate actors in removing deforestation from commodity supply chains. Significantly, much of the progress that has been reported by companies comes through their existing commitments to sustainability standards and certification (Mallet et al., 2016).

The financial sector has also responded to the momentum by pledging to support sustainable commodity production with the aim of taking deforestation out of their lending portfolios. One of the most important agreements in this direction is the Soft Commodities Compact, developed as a collaboration between the **Banking Environment Initiative** (BEI)⁴² and the Consumer Goods Forum (CGF). Signatory banks to the compact agree to use "appropriate financing mechanisms" to help non-RSPO certified clients achieve certification, such that by 2020, all their corporate and investment banking clients in the palm oil sector will be RSPO-certified. To date, only large international banks have signed on with no regional or local banks in emerging markets yet participating. On that topic, more information can be found in a very informative and up-to-date series on the attitudes of the oil palm financiers towards company sustainability on Mongabay website⁴³. Bregman argues that Lenders and investors lag behind and need a better understanding of the opportunity of removing deforestation risk across portfolios. Forest 500 rankings show that no investors and lenders have zero deforestation policies in place. Most financial institutions do not fully understand deforestation risk, so regard it as non-material to investment decisions. Most fail to offer favourable terms to sustainable commodity production. This drives investment towards deforestation, rather than away from it (Bregman et al., 2016).

Importantly, standards themselves are responding to this political and corporate momentum towards no deforestation.

In order to create the space for market recognition for front runners within the RSPO, the **Palm Oil Innovation Group** (POIG) was created. The POIG Charter sets out a clearer framework for companies to commit to removing forest destruction, peat land conversion and labour, land and

42 <http://www.cisl.cam.ac.uk/business-action/sustainable-finance/banking-environment-initiative/programme/soft-commodities>

43 <http://news.mongabay.com/2016/02/how-can-banks-spur-the-palm-oil-industry-toward-sustainability/>

human rights violations from members' supply chains. Additional transparency and reporting requirements allow for open information on performance. The POIG is supported by both current RSPO members as well as NGOs who are currently not satisfied with the RSPO approach such as Greenpeace. POIG requirements align to numerous company commitments (e.g. Unilever, Ferrero, Mars and Wilmar) which go beyond current RSPO requirements. Importantly the group aim to demonstrate that by setting and implementing ambitious standards, the industry can in particular break the link between palm oil and deforestation, and human, land and labour rights violations (POIG website).

In March 2016, the POIG launched the second version of the POIG Charter verification indicators. The first version of the verification indicators was released in April 2014 and was field tested by the founding grower members of POIG: Agropalma, DAABON, and New Britain Palm Oil⁴⁴. From March 2016 onwards, third-party auditors will use the second version of the POIG Charter indicators to verify compliance with the POIG Charter, which outlines leading standards for protecting forests, peatlands, biodiversity, and carbon, whilst upholding the rights of local communities and workers, and improving livelihoods for local communities.

Responding to the concerns that the current RSPO standard does not adequately address deforestation (and associated initiatives such as the Palm Oil Innovation Group), RSPO recently introduced **RSPO-NEXT**⁴⁵. It implements a set of indicators that members need to meet on top of the existing RSPO certification in order to effectively cut the link between their production of palm oil and climate conflict. This includes having a strong position on no deforestation. In addition to adhering to RSPO Principles and Criteria, palm oil growers will have to introduce a broader no-deforestation policy. This policy will allow companies to develop a palm oil plantation only in areas where vegetation and soil contain low stocks of carbon, thereby limiting carbon dioxide emissions caused by any form of forest conversion. Other indicators included in the RSPO NEXT framework are: no use of fire; no use of the Paraquat pesticide; no planting on peat; reducing greenhouse gas emissions; respecting human rights; and ensuring transparency and due diligence in sourcing from independent suppliers. RSPO NEXT would not be a stand-alone standard but would build on the existing P&Cs, on a voluntary basis. This means that any company that seeks RSPO NEXT verification would already have to be certified according to the P&Cs. Under this system, consumer brands that want to source from the best palm oil producers would be able to buy certified sustainable palm oil from RSPO NEXT verified companies (RSPO website).

Another interesting development within RSPO is the development of a '**jurisdictional approach**' for palm oil certification bringing together state or provincial governments, producers and companies in multi-stakeholder land use planning and monitoring in response to zero deforestation commitments and the desire to find scalable solutions for certification. RSPO is currently developing pilots in 3 regions. The Chief Minister of the state of Sabah (Malaysia), Governor of Central Kalimantan Province and Governor of South Sumatra Province (Indonesia) made public commitments to ensure that all palm oil produced within their state jurisdictions will be certified sustainable within a 10 year period in a stepwise approach (2 years for interim certification + 8 years for full certification). The Jurisdiction Working Group is working with both local and international organisations to conduct base level assessments (census of palm oil farmers, mapping HCV, etc) and build local capacity in the provinces. The proposed steps in the process of getting to full jurisdictional certification include:

- Identifying local champions to declare public support for the sustainable landscape vision (i.e. commitment from top level government in the jurisdiction and development of a multi-stakeholder group to guide the process);

44 According to POIG website, New Britain Palm Oil is a founding member of the Palm Oil Innovation Group, and carried out a successful verification audit against the POIG Charter requirements and pilot indicators in October 2014. In February 2015 NBPOL was acquired by Sime Darby Bhd, which is not a POIG member. POIG requires membership at a parent-company level so NBPOL is not currently a POIG member.

45 <http://www.rspo.org/news-and-events/news/taking-rspo-to-the-next-level>

- Land use planning to establish go/no go areas for development based on HCV and High Carbon Stock assessments in order to remove deforestation from palm oil development;
- Establishing a compensation mechanism to offset primary forest and HCV loss;
- Developing and applying a local interpretation of Free, Prior and Informed Consent (FPIC) to remove conflict from palm oil development:
- Establishing monitoring tools
- Developing incentive mechanisms
- Developing appropriate methodologies for verification (e.g. developing document and records to provide evidence for verification)
- Coordinating capacity building and extension activities to improve agronomy practices and ensure proper treatment of the workers

The intention with the pilots is to provide the jurisdictions with interim certification status once there is an agreed land use plan in place that is respected by all stakeholders⁴⁶, in conjunction with a challenging, time-bound plan to ensure that all palm oil development complies with the remaining criteria of the RSPO P&C (Mallet et al, 2016).⁴⁷

Overall, the palm oil supply chain is facing unprecedented scrutiny from governments, regulators, NGOs, investors, and consumers from developed economies regarding how its practices impact the environment and the wider world. Political and corporate momentum is accelerating. At no time in history has there been greater political and corporate awareness of the need to curb tropical deforestation and move away from business as usual.

5.3 What does this mean for Papua New Guinea?

PNG stands at a crossroad. Either pursuing a short-sighted position that may put its national resources and industries at risk or manage the production of its key agricultural commodities with vision and long-term strategy. In the medium-term, it seems clear that investors, buyers, traders, and ultimately China and India, will all converge around the concepts of sustainability and traceability.

According to the 2015-2016 Annual Report from the Tropical Forest Alliance 'The upfront costs of curbing deforestation are much less than the potential costs of letting deforestation run its course. Investing in sustainable supply chains can represent an opportunity for countries to increase their competitiveness and work their way out of, or avert economic crisis, by securing and diversifying export markets and securing foreign exchange' (TFA, 2016).

In addition to maintaining competitiveness in the global market and securing foreign exchange, pursuing an adequate sustainability strategy and engaging in certification also provides an opportunity for the Government of PNG to create the necessary public-private partnerships to achieve its long-term objectives in the agricultural sector as presented in STaRS, DSP 2030 or Vision 2050.

In that respect, it is important to note that demand for deforestation-free palm oil (and other commodities) is currently much stronger in Western markets than in emerging economies such as India and China, which can be seen as reducing the influence of existing commitments. For example when mentioning the existing commitments for sustainable palm oil in Europe during our interviews in Port Moresby, different informants indicated that if PNG's Palm Oil loses market access to Europe (its principal buyer), PNG would naturally switch export to India or China. India

46 after verification by third party certification body in compliance and fulfillment with the above steps, except for the capacity building and extension for good agronomy practices and proper treatment to labour which may need more time to accomplished

47 This report prepared by ISEALin April 2016 provide an excellent overview on landscape approaches and zero deforestation commitments.

and China are, for example, among the most important importers of palm oil produced in Indonesia and Brazil.

Nonetheless, a press release dated December 2015 from RSPO entitled “China and Sustainable Palm Oil: From Challenge to Partner”⁴⁸ indicates that despite existing challenges (e.g. low uptake of CSPO in China), 44 Chinese organisations are now members of the RSPO, and a MoU was signed between the China Quality Mark Certification Group and RSPO to jointly explore pathways and approaches to implement the RSPO standards in the China market. In October 2015, the China Chamber of Commerce of Foodstuffs and Native Produce also presented its Guide for Overseas Investment and Production of Sustainable Palm Oil by Chinese Enterprises. These guidelines are still in the process of being finalized, but if successfully implemented, China’s commitment will play a big role in turning the tide toward sustainable palm oil: China is one of the world’s largest purchasers of palm oil, accounting for 12% of the global market. In June 2016, prior to considering the setting up of a national approach for promoting trade and consumption of sustainable palm oil in China, a Chinese delegation will be visiting the UK, Netherlands and Italy and attend the RSPO European Roundtable meeting (EURT 2016) to learn from the experiences of key players involved in the development and implementation of national commitments⁴⁹.

48 <http://www.rspo.org/news-and-events/news/china-and-sustainable-palm-oil-from-challenge-to-partner>

49 <https://www.eurt.rspo.org/register/general/PageLoad.asp?PageTitle=Agenda>

6. RECOMMENDATIONS

6.1 What has been proposed so far?

Addressing the drivers of deforestation and forest degradation will make or break a country's success in implementing effective REDD+ actions.

Best practices exist to address commercial agriculture as a key driver of deforestation and forest degradation. For example, the following intervention strategies have already been used extensively in other countries for forest conservation activities:

- Agricultural production intensification that reduces the need for forest conversion
- Increase sustainable production through certification of agricultural commodities (e.g., RSPO, Rainforest Alliance, etc.)
- Improved monitoring and law enforcement
- Prohibit forest clearance (e.g. new protected areas, deforestation moratorium)
- Land-use planning
- Ban the import of unsustainable forest products (e.g. Amazon soy moratorium, US Lacey Act and EU FLEGT)
- Increase the market for sustainably produced rural products (certification)
- Direct PES (e.g. payments for watershed protection)
- Improved rural producers technologies
- Increase economic opportunities in traditional rural areas to discourage migration to the forest frontier
- shifting production to degraded lands

Matching these practices to local contexts is the primary job in developing effective REDD+ intervention strategies (WWF, 2013a).

A recent report prepared by the Global Canopy Program presents a number of action points to be considered by forest-owning governments to provide the enabling environments for achieving zero (net) deforestation commitments made by producers and companies (see table 6.1 below). According to the report, just 25 national governments manage 87% of the world's remaining tropical forests. Their adoption of public policies towards zero deforestation varies considerably with some, such as Colombia, Peru and Brazil scoring the highest under the Forest 500 ranking and others such as Thailand, Myanmar and Papua New Guinea scoring poorly (Bregman et al., 2016).

Table 6.1: Action points for forest-owning governments to support zero-net deforestation commitments

CREATING ECONOMIC AND POLICY INCENTIVES FOR SUSTAINABLE PRODUCTION OF FOREST RISK COMMODITIES	Economic incentives	New and reformed incentives to support the business-case for sustainable production including introducing tax incentives; reforming agricultural subsidies; linking domestic credit lines to compliance with policies and best-practices e.g. agro-ecological zoning; and investing in payment for ecosystem services.
	Resolve land ownership and tenure issues	This would enable smallholder farmers willing to adopt sustainable practices to access relevant credit lines. This can also support implementation/development of land use zoning strategies for the sustainable production of forest-risk commodities.
	Restoring deforested landscapes for agricultural production	Restoring millions of hectares of previously deforested tropical lands for agricultural production offers a means to deliver the scale of increasing demand for food, pulp and paper without increased clearance of primary forest. Large scale financing and technical capacity building remain key challenges.
IMPROVING REGULATORY FRAMEWORKS FOR FOREST RISK COMMODITIES	Effective enforcement	The effectiveness of legislative and regulatory efforts to support the production of sustainable FRC, such as Indonesia's Sustainable Palm Oil (ISPO) certification program for national production sustainability standards, is dependent of monitoring and enforcement of compliance.
	Bilateral agreements with consumer markets	The EU FLEGT plan is central to efforts to remove illegally sourced timber from the EU market. Under this plan, bilateral Voluntary Partnership Agreements (VPAs) are negotiated between the EU and timber- producing countries. Under these VPAs, timber- producing countries establish a legality assurance system to ensure timber licensed for export is legally produced. Whilst 15 countries have signed or are negotiating VPAs, so far no FLEGT licensed timber has been exported. There is a lot of interest in extending this model to the sourcing of other forest risk commodities.

Source: Adapted from Bregman et al, 2015

In the case of Papua New Guinea, policy options available to the government to address the key drivers of deforestation and forest degradation have been proposed in a recent report on REDD+ national circumstances and abatement levers prepared by the Wildlife Conservation Society (WCS). A number of workshops were conducted at national and regional level to generate a long list of abatement levers available in the country for each drivers of deforestation. In the case of commercial agriculture (ranked 3rd after commercial logging and subsistence agriculture), table 6.2 presents a summary of the policy options proposed.

Table 6.2: Summary of policy options identified by the stakeholder group for commercial agriculture

Policy options	How will it function	Necessary steps to put policy in place	Appropriate level
Mandate sustainably certified palm oil	The demand for palm oil is expected to increase globally and while the amount to palm oil produced in PNG is fairly small it could grow substantially to meet this demand. If unsustainable practices are used (as is the case in Indonesia) the impact to forest resources would be significant. Mandating sustainably certified palm oil to target international markets (e.g. Europe and the USA) would help regulate the palm oil industry and help PNG maintain and develop its differentiated market share in sustainable palm oil.	Establish a committee to oversee the development of a national palm oil policy which includes a mandate for sustainable palm oil and standard practices for sustainable palm oil based on the Roundtable on Sustainable Palm Oil (RSPO) standard.	National, Provincial, District, LLG, Ward
Create a national incentive program	Landowner and rural communities in PNG often lack livelihood options and see palm oil companies and other external agents as one of the only income generating options. An incentive program that offers landowners benefits for the conservation and maintenance of their forests could go long way to protecting forest.	Create a Green Fund (capitalized by taxes from mining and commercial agriculture companies) that provides incentives to rural communities to protect their forests. Incentives could be provided in the form of community projects that benefit the whole community.	National, Province, District, LLG, Ward
Weak/poor governance and enforcement.	Similar to forestry the agriculture sector suffers from weak enforcement that results land use decisions that substantially impact forest resources.	Independent oversight body with power to influence relevant laws and policies International media pressure, needs high-level political will	National, Provincial
National land use plan	There is no national land use plan directing the use and management of land in PNG. This creates a situation where different sectors allocate the same piece of land for multiple conflicting purposes (e.g. conservation and forestry). Have a land use plan in place would clarify the long-term goals for PNG for forest various land uses and provide clarity about how REDD+ will be used as a mechanism by different sectors.	REDD+ training and awareness for key sectors (DAL, PLPP) Cross sectoral policies relating to REDD	National, Province, District, LLG, Ward
Provincial land use plan ¹	Develop provincial- level land use plan using a bottom-up planning approach. Plan will allocate land for specific uses and guide the development of individual wards, LLGs, districts and the province as a whole. The plan will rely of high quality remote sensing imagery (e.g. data produced from the Terra PNG program and other datasets) to better understand baseline conditions and	Consult & coordinate with stakeholders at all levels to develop the plan. Plan will rely on bottom up planning to inform the overall approach for the province. This will be carried out using a participatory approach involving all levels of government.	Province, District, LLG, and Wards

allocate land to specific uses such as commercial agriculture.		
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Source: Cuthbert et al., 2015

With regard to palm oil, the report argues the following:

The palm oil industry is economically important for PNG and is a sector that is expected to grow in the future. Historically the oil palm industry has been only a minor contributor to forest loss, however this pattern could change unless specific policies and measures are put in place to control the industry's development. In PNG the risk is that the palm oil industry may follow the uncontrolled and unregulated pattern found in neighbouring Asian countries (...) Currently there are very few palm oil companies operating in PNG, New Britain Palm Oil Limited (NBPOL) being the largest. NBPOL has upheld a commitment to operating in accordance with social and environmental standards for palm oil developed by the Round Table on Sustainable Palm Oil (RSPO). The RSPO standards outline principles and criteria (e.g. avoidance of forests with High Conservation Values (HCV)) that must be followed to certify palm oil as sustainable. By adhering to these standards NBPOL, and PNG as whole, has developed and maintains a niche market for sustainable palm oil. Nevertheless, there are now palm oil companies operating in PNG who do not follow the RSPO standard and in March 2015 the Malaysian based Sime Darby Plantation (one of the largest plantation companies in the world with operations in 15 countries) purchased NBPOL. Presently Sime Darby indicates that they would like to uphold the RSPO standards and practices in PNG but an internal policy shift or external economic conditions could change their commitments. Suggested abatement levers in this area are for PNG to adopt a policy at the national level mandating that all palm oil operators follow sustainability standards such as those developed by the RSPO. This would force palm oil companies operating in PNG to adhere to these strict standards in order to manage and reduce the amount forest loss by oil palm development. This could initially be achieved by the PNG government establishing to oversee the development of a national sustainable palm oil policy. The responsibility to the policy would likely fall to the Department of Agriculture and Livestock (DAL). Expertise and capacity to develop the policy, oversee the implementation of the program and train staff in DAL will be required' (Cuthbert et al., 2015 : 57)

Another key policy option proposed by the report under logging, but with direct relevance to agricultural commodities, is to manage the existing SABLs, one of the biggest threat to PNG forest resources and REDD+ in the future. While the government imposed a moratorium on issuing SABLs and established a commission of Inquiry to examine their legality in 2011 (which found that many SABLs were illegally issued), to date there has still been no firm action to cancel SABLs that were illegally issued and forest clearance on some SABLs continue unhindered. Accordingly, the report proposes the following policy and measures:

1. Establish an independent committee to review current SABLs and cancel those that are illegal. This action would include carefully reviewing each project in the context of existing laws and policies, particularly the steps around the formation of the ILG, the completion of a proper environmental impact assessment under the Environment Act, and the review and approval of the project by the Provincial Forest Management Committee (PFMC).
2. Establish a land use planning committee to oversee and monitor SABLs that are allowed to continue. This would apply for the case where the project developer has followed all relevant laws and policies and has legitimate plans to develop an agro-forestry project. Such projects should be allowed to continue, provided that a locally formed committee is appointed to oversee and monitor the project (Cuthbert et al., 2015)

6.2 Consultant's recommendations

The different policy options proposed by the Wildlife Conservation Society constitute an excellent starting point to identify the most appropriate intervention strategies available to the government of PNG to address commercial agriculture as a key driver of deforestation and forest degradation.

Resolving the SABLs issue, creating a national incentive program, establishing national and provincial land use plans or developing a national sustainable palm oil policy are all appropriate policies and measures to reduce the future impact of key agricultural commodities on forest cover in PNG.

While this list represents a long list of abatement levers, it is then important to identify priority areas for action taking into account considerations such as effectiveness, efficiency or impact. What is the capacity of the different actors involved to actually implement the proposed intervention strategy? What is the degree of political and social complexity and acceptability of the intervention strategy? How to ensure national ownership? How much will it cost compared to how much can be achieved? How will the strategy maximise benefits for rural communities? Or how long will it take to implement?

Considering that: (i) the palm oil sector is likely to have the most impact in forest cover in the short to medium term due to its unregulated expansion, (ii) the palm oil sector is the primary source of agricultural export revenue in the country (iii) the coffee and cocoa sectors currently present a lower risk on forest cover and are supported by a large USD 100 million multi-donor national program; **it is proposed that the future REDD+ strategy should focus its effort on the palm oil sector** in terms of addressing commercial agriculture as a key driver of deforestation and forest degradation.

For the coffee and cocoa sectors it will be important for the existing Productive Partnership in Agriculture Project and the Cocoa and Coffee Commodity Boards to significantly strengthen their activities aimed at increasing the share of certified sustainable cocoa and coffee before the end of the project in 2019. This will help reduce the potential impact on forest cover, maximise benefits for local communities and better position PNG in terms of differentiated markets. REDD+ should also closely monitor the development of large-scale investments, if any, in the short to medium term, as well as so-called 'new growth areas' in the cocoa and coffee sectors.

With regards to palm oil, the consultant team propose the following key recommendations which have, we believe, the largest potential to reduce its future impact on forest cover in PNG, while allowing for ongoing growth within the sector. They are presented according to priorities.

PRIORITY RECOMMENDATION: 1 – Development of a national policy for sustainable palm oil

Developing a national policy for sustainable palm oil that delivers systemic solutions to the root causes of unsustainable production in PNG is a paramount importance to reduce the risk of deforestation associated with current palm oil expansion. Accordingly, it is proposed to contract as soon as possible a team of experts to prepare the groundwork for the development of the policy. Ideally, this work should be completed by December 2016.

The aim of this preparation study would be twofold. Firstly, to fill the information gaps identified in this report and secondly to prepare a detailed list of policy options to be then considered through rigorous multi-stakeholder consultation processes.

(1) Information Gaps

This report have identified a number of areas where more data would be needed before being able

to present policy options for a future national sustainable palm oil policy. The priority information gaps are presented in table 6.3.

Table 6.3: Key data to be collected by the preparation study

Palm Oil Expansion Plans	Building on the data provided in this report, further research is required to conduct a comprehensive identification/mapping of all the existing palm oil development in the country. Meeting with the investors and the government counterpart (at national or provincial level) would be essential to collect additional data such as <ul style="list-style-type: none"> - exact location, size of the operation, number of mills, etc. - how much employment and investment are generated in the provinces where expansion occurs - what is the viability of these new developments - what is the business case for international investors considering the higher costs of production in PNG - what international markets link are already established - where the funding is coming from (bank lending, etc.) - what type of arrangements are made with customary landowners for each operation.
Cost/Benefit Analysis of different models of palm oil expansion	Conducting a cost/benefit analysis comparing the current model of uncontrolled expansion versus a model of regulation of future operators over the next 20-30 years would be important for the government to understand better if the upfront costs of curbing deforestation associated with palm oil expansion are less than the potential costs of letting deforestation run its course (e.g. in terms of export revenues, price differential between European/Chinese markets, etc.).
Land suitability mapping for sustainable palm oil	Independent reports are needed to understand exactly which parts of the country are suitable for palm oil production and which parts are suitable for expansion that could comply with certification criteria (i.e. land suitability mapping for sustainable palm oil). Such mapping will help all actors to better understand the potential for sustainable palm oil production in PNG. ⁵⁰

(2) List of policy options for sustainable palm oil

The future national policy will have to detail the best route to reduce the future impact of palm oil on forest cover in PNG. Initial analysis from this assessment already indicates different options to consider:

It can be decided that **all future palm oil operators should follow existing sustainability standards** such as RSPO, Rainforest alliance/SAN, or even RSPO next (with stricter requirements in terms of deforestation, peat, etc.). Therefore, making certification of palm oil operations, mandatory in PNG (as proposed by WCS) and preventing the entry of non-certified low cost producers in the country. Passing such a policy would promote and support customary land rights and landowners, increase environmental integrity and responsibility, facilitate the adoption of global best practices by producers and millers, and increase transparency of production and supply chain in full compliance with relevant PNG laws and legislation. While this route is certainly a sensible option for all future operators (and probably the fastest option), it is important to understand its implications for existing operators who have already planted under various SABL arrangements and will soon be ready to export. As previously indicated, some of the current operations being developed will not comply with existing voluntary standards for palm oil in terms of 'cut-off dates' or 'free, prior and informed consent'. It would be important to discuss the transition options available for those operations and have detailed information about which operations exactly could or could

50 For example SNV has developed a siting tool that aims to identify suitable areas for sustainable agricultural expansion. SNV's Siting Tool has been applied and tested on landscapes in Democratic Republic of Congo, North Sumatra, West and Central Kalimantan and Vietnam for commodities such as palm oil, rubber, coffee and cocoa. The Siting Tool is used to guide planning processes in forest-agriculture landscapes and informs stakeholders across the landscape on options for sustainable agricultural expansion. By zoning the landscape for the suitability of a target crop as well as conservation values, strategies for sustainable development as well as target areas for interventions and (government) support can be designed (ISEAL, 2016).

not be certified.

Another option would be for PNG to **define its own sustainability standard** as done by Malaysia (MSPO) and Indonesia (ISPO). This will require significant efforts and considerable time which might not be completely justified with PNG's current level of production, potential for certification expansion, and existing capacity. In order for the standard to be recognised internationally and therefore ensure market access, PNG will have to follow the different ISEAL code of practice for sustainability standards (e.g. Standard-setting code, assurance code, impact code⁵¹) or other relevant accreditation bodies.⁵²

PNG could also consider **piloting RSPO's jurisdictional approach** detailed in the previous chapter. For example, PNG could pilot such an approach in Western New Britain, under which arrangement the entire province would have to comply with the requirements set by RSPO. This could be an interesting option if Eastern New Britain rapidly entered the market with non-certified operations (e.g. RH, Tzen Nuigini) and the existing 'historic' operations want to maintain their competitiveness in the market. RSPO is currently piloting this approach with the government of Sabah, Central Kalimantan and South Sumatra as part of the RSPO jurisdiction framework. This will also be a long process as RSPO envisages a step-wise approach with interim certification after 2 years (they are still discussing how this interim certification will be rewarded in terms of market access) and full certification which might take up 8 to 10 years to achieve. However, first movers are often rewarded in such schemes and therefore this option could also be envisaged considering the existing business case for sustainability for the Government of PNG. The criteria to participate in a jurisdictional approach include the following: (i) Decision on the jurisdiction is taken by a multi-stakeholder process (ii) how the jurisdiction prevents deforestation (land mapping, etc.) (iii) how they handle the loss of HCV since 2005 (iv) how they manage conflicts with communities (v) how performance is monitored (vi) how they appoint group managers to work on the jurisdiction (vii) how RSPO can verify the first 6 conditions and what the jurisdiction needs to provide. RSPO indicated during interviews that they would be interested to pilot the approach with the Government of PNG provided they are interested in the approach.

Based on the additional data collected by the proposed study, these options relating directly to certification should be expanded and refined. Other policy options would also need to be considered through stakeholder consultations in the following areas:

- **Development of improved regulatory framework and enforcement mechanisms**
- **Identification of the best strategies to resolve the SABL issue**
- **Identification and establishment of new Public-Private Partnerships**
- **Identification and implementation of necessary capacity building programs**
- **Development of economic and policy incentives**
- **Any other activities deemed necessary to ensure the long term sustainability of the palm oil sector in PNG**

51 <http://www.isealalliance.org/our-work/defining-credibility/codes-of-good-practice>

52 <http://www.isealalliance.org/our-work/defining-credibility/credibility-principles>

RECOMMENDATION: 2 – Establish PNG's first multi-stakeholder Sustainable Palm Oil Platform (PNGPoP)

Taking into account the key findings from the study, the specificities of the local context, existing best practices, policy and measures already proposed in the context of PNG, the second priority should be to establish a *multi-stakeholder forum which enables collective agreement on sustainable and systemic solutions for the production of palm oil that is respectful for the environment, expands social benefits and improves PNG's market competitiveness.*

The platform, **building on the model and experience of the Indonesia Palm Oil Platform (InPOP)**, is expected to directly address some of the key challenges faced by the sector in Papua New Guinea by increasing **dialogue, transparency, ownership** and **coordination** of the sector leading to reduced pressure on forests. The rationale for the platform and initial ideas on its functioning are presented in table 6.4.

Table 6.4: Initial Proposal for the PNG Palm Oil Platform

<p>Why?</p>	<ul style="list-style-type: none"> • To define what needs to be done by everyone at the table and accordingly give credibility to the process and ensure national ownership; • To resolve the issue of lack of coordination between government departments and between the different actors involved in the palm oil supply chain; • To avoid mistakes of the past and ensure coordinated action at various levels to address the issue of deforestation associated with current palm oil expansion; • To rebuild trust between government, private sector, civil society and customary landowners; • To increase the transparency of the development of the sector; • To support PNG to maintain and develop its differentiated share in sustainable palm oil; • To support STARS sustainable strategy and help translate into practice the proposed green growth framework; • To build a new image of the sector for future competitiveness in global market; and maintain and increase export revenues from palm oil; • To allow other policies and measures to address the key drivers of deforestation and forest degradation to be developed in a participatory way and ensure buy-in from each actors (e.g. national palm oil policy, new regulations for investors, etc.)
<p>What?</p>	<ul style="list-style-type: none"> • Multi-stakeholder dialogue aimed at finding concrete solutions to the sustainability challenges in the Papua New Guinea palm oil supply chain; • Open and transparent forum; • Neutral space to align, take ownership and develop a joint concrete action plan necessary to transform a country's commodity sector; • Monitor and adapt actions that address the root causes limiting the sustainability of the PNG palm oil sector; • Influence and harmonise government policy that ensures a strong and coherent legal framework for the sustainability of PNG palm oil; • Establish partnerships and coordinate existing actions that forward the sustainability of PNG palm oil; • Ensure the policies intended to support the environmental sustainability are also maximising benefits to rural communities through civil society and smallholders/landowners participation; • Powerful vehicle to share best practices.

Who?	<ul style="list-style-type: none"> • Government leadership at minister level; • UNDP Neutral convener and facilitator; • Office of the Prime Minister, CEPA, DAL, Ministry of planning, PNGFA, DLPP, CCDA, restructured OPIC; • Provincial department representatives; • Smallholders/landowners representatives; • Private Sector – Certified operations (NBPOL, HOPL) and new operators interested to participate; • Civil society representatives (e.g. EEF, RSPO/Rainforest Alliance, WWF, Greenpeace, etc;) • Financial institutions; • Global partners, UN agencies as appropriate, other donors
When?	<ul style="list-style-type: none"> • To start in 2017 as part of implementation of the REDD+ strategy • Design takes usually 1 to 2 years based on experience (including scoping, formalisation, preparation) – The time can be significantly faster based on strong government willingness to establish and launch it; • Dialogue 2 years; launching, development of action plan • Implementation 3 years
How?	<ul style="list-style-type: none"> • Steering Committee to provide coordination and address any disputes to enable consensus-based decision-making • Platform management unit with 4 key roles (stakeholder management, technical specialist, communication and administration) – cost to be covered by UNDP/REDD+ • Different Technical Working Groups to discuss, review and agree on key subjects such as Policy, Regulations/enforcement, Enabling Environment certification and market access, land use, capacity building, etc. • Key outcome is a National Action Plan for the long-term sustainability of palm oil production in PNG

While some informants are highly supportive of the establishment of a multi-stakeholder Palm Oil Platform in PNG, others are skeptical that it will work in the country context due to the usual lack of participation in multi-stakeholder forum in the past. The proposed platform is a long term investment that will require significant stakeholder engagement and is based on a number of pillars to ensure the long-term success of the initiative:

- **Government leadership** at minister level **based on a strong business case** to engage in sustainability **and fully aligned with government long-term ambitions** in the agricultural sector (e.g. STARS/ Green Growth Framework and its proposed policy instruments)
- **Identification of sustainability champions** to participate in the platform and lead the process: stakeholder prioritisation based on the degree to which each stakeholder has influence over the platform objectives and their level of interest in palm oil sustainability.
- **Democratic dialogue and multi-stakeholder commitment**
- **Facilitator on a long-term agreement** creating an environment of trust for participants and for methodically conducting the process and participating in its design
- **Platform Steering Committee** to drive platform work forward, take practical decisions about the process and take formal decisions based on the input of platform / committee participants
- **Technical committees** to provide expertise, learning, research and recommended solutions/actions for the National Action Plan (see below) within their specific technical area.

Similar platforms and associated committees have already been successfully established by the UNDP Green Commodity Program (GCP) in other countries (see Annex4 for more information on the Indonesia Palmoil Platform). There are currently national platforms running in Ghana on cocoa, in Costa Rica on pineapple, in Dominican Republic on cocoa, and in Ethiopia on coffee⁵³. Others are being established in Paraguay on beef and soy and in Peru on coffee. The advisory support from GCP will be needed in order to understand the success and challenges of the existing platforms and integrate the learning into the development of the proposed platform in Papua New Guinea.

53 http://www.undp.org/content/undp/en/home/ourwork/environmentandenergy/projects_and_initiatives/green-commodities-programme/what-we-do/ncp/

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ANNEX 1: List of people interviewed

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2	Darius Kalulu	Provincial Forest Officer, Toriu	Papua New Guinea Forest Authority	
3	Linus Billy	Manager, Planning Division	Department of Lands and Physical Planning	billyl@lands.gov.pg billylinus7@gmail.com
4	Gibson Pitz	Senior Officer	Department of Lands and Physical Planning	pitzg@gmail.com pitzg@lands.gov.pg
5	Robin Lume	Lands Officer	Department of Lands and Physical Planning	dabbylume@gmail.com lumer@lands.gov.pg
6	Damien Ase	Principle, Ase Lawyers	Legal Counsel at Ase Lawyers	daseari2@yahoo.com
7	Roy Banka	Coordinator	Food and Agriculture Organisation (FAO)	Roy.Banka@fao.org
8	Clement Victor	Senior Project Officer	Productive Agriculture Partnership Program	clement00022000@yahoo.com
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10	Potaisa H Hombunnaka	Project Manager, Goroka	Productive Agriculture Partnership Program	ppap@cic.org.pg
11	Martin Powel	Coordinator, Kokopo	Productive Agriculture Partnership Program	C2c@papp.cocoaboard.org.pg
12	Graham McNally	Manager	Agmark Group of Companies	gmcnally@agmark.com.pg
13	Bob Tate	Executive Officer	Papua New Guinea Forest Industry Association	bob@fiapng.com
14	Carlos Battaglini	Environment and Agriculture Programme Manager	European Union	carlos.battaligni@eeas.europa.eu
15	Emily Flowers	Team Leader	Australian Center for International Agriculture Research	Emily.Flowers@dfat.gov.au
16	Joe Katape	Manager, Environment Sustainability	Conservation and Environment Protection Authority	jkatape@dec.gov.pg
17	Raymond Unasi	Executive Officer to CEO	Coffee Industry Corporation	runasi@cic.org.pg runasi@yahoo.com
18	Brian Manny	Statistician	Coffee Industry Corporation	bmanny@cic.org.pg
19	David Kura	Chairman, West New Britain Palm Oil Estate Association	West New Britain Mini-Estates, Hoskins	David.kura15@gmail.com
20	Henry Tuki	Spokesman, Bule ILG, Rigula Oil Palm Estate Association	Rigula Palm Oil Estate, Hoskins	
21	Malcolm Bai	Chairman, Rigula Association, Rigula Oil Palm Estate	Rigula Oil Palm Estate	
22	Arthur Matiunga	Officer, Economics Division	PNG Cocoa Board	mmatiunga27@gmail.com
23	Mark Senson	Climate Change Officer	PNG Eco-Forestry Forum	smark@ecoforestry.org.pg
24	Thomas Paka	Consultant to Eco-Forestry Forum and former ED	PNG Eco-Forestry Forum	tpaka@ecoforestry.org.pg
25	Stephen Mombi	Deputy Secretary, Agriculture Development Division	Department of Agriculture and Livestock	mombistephen@gmail.com
26	Allan Oliver	Operations Officer, Sustainable Development	World Bank	aoliver1@worldbank.org
27	Michael Paisparea	Public Relations Manager	Tzen Nuigini Ltd	michaelpaisparea@gmail.com
28	Bernard Lolot	Land Acquisition Manager	Tzen Nuigini Ltd	Lolotbernard45@gmail.com
29	Ian Orrell	Head of sustainability	New Britain Palm Oil Limited	ian.orrell@nbpol.com.sg
30	Peter Callister	Manager, sustainability	New Britain Palm Oil Limited	peter.callister@nbpol.com.pg
31	Michael Buka	Manager, Hoskins	Oil Palm Industry Corporation	msbuka2012@gmail.com opichosk@online.net.pg

32	Tobias Wambu	Coordinator Large Scale Commercial Projects	Oil Palm Industry Corporation	wambutobias@gmail.com
33	Sios Wemana	Manager, Milne Bay	Oil Palm Industry Corporation	siyos@kulamail.net
34	Leslie Wungen	General Secretary	Oil Palm Industry Corporation	lwungen@opic.com.pg
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36	Sammy Waru	Sustainability officer, Sustainable Management Service	Monpi	Sammy.Waru@ecomtrading.com
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38	Elijah Kaove	Manager, Sustainable Management Service	Monpi	Ekaove@ecomtrading.com
39	Terence Barambi	Deputy Director	Climate Change and Development Authority	
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41	Tom Vigus	Director	Ecologically Sustainable Enterprises Pty Ltd	tdiwai@bigpond.com.au
42	Osea Gideon	Senior Lecturer	PNG University of Technology	Osea.Gideon@for.edu.ac.pg
43	Yohanes Izmi Ryan	Strategic Project Director	Roundtable on Sustainable Palm Oil (RSPO)	yohanes@rspo.org
44	Thijs Pasmans	Policy Maker Sustainable Sourcing	MVO - The Netherlands Oils and Fats Industry – Dutch Alliance for sustainable Palm Oil	pasmans@mvo.nl

ANNEX 2: Recommendations from the Functional and Expenditure Review

1. The functions of DAL have to be redefined so it can play an effective role as the agricultural sector apex body responsible for (a) development of policy and legislation, (b) coordination and monitoring of government policy implementation by commodity boards and provincial agencies, and (c) facilitation and linking of sector programs and resourcing requirements with government central agencies and external donors.
2. Approval of Parliament should be sought for a National Agriculture Administration Act to set out the responsibilities of DAL in relation to commodity boards and provincial agencies in relation to agriculture matters.
3. The Secretary of DAL should be given responsibility for scrutiny of commodity boards and agencies. It is proposed that the Secretary be enabled to do this as chairperson of the policy and funding entity to be called the Agriculture Investment Corporation (described below).
4. DAL must address the issue of inadequate funding of various commodity boards and agencies in agriculture. It is important in the long run that effective funding mechanisms be determined and these be embedded in legislation so that there is continuity and sustainability of these sources of funding to agriculture institutions.
5. The National Agriculture Research Institute (NARI) should assume responsibility beyond its current mandate where it can accept a greater development role than in the past. The first step in this direction would be its return to the fold of agriculture.
6. There is a need to formulate a new extension policy framework that promotes a pluralistic, farmer driven, and market oriented extension service that (a) brings together all development partners and private sector service providers down to the district level, including the commodity boards and agencies; and (b) promotes public-private partnerships and resourcing.
7. Commodity boards should take charge in adopting and utilising policies that encourage smallholder farmers to upscale and expand their commercial activities, drawing upon the experience of the Bris Kanda and PPAP projects in subsidisation of production inputs.
8. Commodity boards and agencies should identify strategic partners who are best positioned and work in partnership to contribute to expansion of domestic cash crops by encouraging productivity improvement by smallholder participants.
9. Policies should be developed to revive the estate sector with a view to: making better use of available land and promoting use of improved technology; expanding processing and marketing opportunities; and expanding employment opportunities in rural areas, including opportunities for skilled employment.
10. The Government should encourage cooperation between relevant agriculture sector agencies (including commodity boards) and educational authorities to: (a) ensure that school students obtain basic scientific knowledge about agriculture and are provided accurate information about commercial agriculture as a career option; and (b) improve agricultural training provided at tertiary education institutions.
11. Policies should be developed to enhance the resilience of smallholder farmers in the face of inevitable fluctuations in commodity prices.
12. A peak body needs to be established for registering agriculture professionals in PNG which is part of the proposed rationalisation of the commodity boards and agencies following similar legislative model of the Medical Registration Act 1980 and the Lawyers Act 1986.
13. The pursuit of important social objectives, such as fostering widespread opportunity for advancement of men and women through greater participation in commercial agriculture, should be funded from funding made available through the proposed AIC and the grant schemes rather than through industry levies.

14. Where possible, agricultural input subsidies should be provided directly to farmers rather than to input suppliers. Consideration should be given to provision of input subsidies to farmers through a voucher scheme that would entitle eligible farmers to purchase inputs at reduced cost.
15. The funding principles for provision of services to agriculture should be embodied in legislation which sets out rules for determining funding levels and contributions by government and industry.
16. Chairpersons of commodity boards and agencies should be appointed by the government according to RSA Act 2004 procedures.
17. The proposed National Agriculture Administration Act should specify that the Secretary of DAL should be 'default chairperson' (and responsible for exercising all the powers of chairperson) when the position of chairperson of a commodity board is vacant for any reason.
18. There should be a maximum of five directors appointed to each commodity board or agency, with three attendees constituting a quorum.
19. Processes for appointment or election of board members should be designed to ensure that the people selected have the skills required to make an effective contribution to governance and leadership of a commodity board.
20. Board members, chairpersons and their deputies should not be permitted to hold office for more than two consecutive terms.
21. To ensure commodity board positions are filled in a timely fashion, a course of action should be specified for appointments to be made if time limits on standard approval processes are not met.
22. The agency responsible for funding and monitoring of boards should require them to give high priority to developing cultures of ethical conduct within their organizations, by holding chief executives to account for organizational culture. Where entrenched problems exist, boards should appoint new chief executives to remedy them.
23. High priority should be given to ensuring that commodity boards and agencies collect and publish the information necessary to comply with the basic standards of transparency and accountability expected of government agencies, and that they collect and publish the data required for economic analysis of their performance.
24. Processes for establishing remuneration levels for staff of commodity boards and related agencies should be sufficiently flexible to enable higher remuneration levels where this is necessary to attract, recruit and retain suitably qualified staff.
25. The proposed "16 Point Grade Salary and Benefits Structures to be further reviewed and benchmarked for adoption by commodity boards subject to approval by SMC and SRC.
26. The Cocoa and KIK Boards should remain separate entities, and their R&D functions currently carried out by CCI should also be separated and subsumed into the two boards. CCI should be abolished.
27. An Oil Palm Commodity Board should be established to take over the functions of OPIC and provide a formal consultative mechanism between the industry and government, with a view to facilitating further development of both the estate and smallholder sectors of this industry.
28. A Food and Grains Board (FGB) should be established (through the merger of FPDA and NARI).
29. Proposals for establishment of a Livestock Development Board (LDB) and Rubber Development Board (RDB) should proceed as planned.
30. Specific provisions should be made to ensure that investments by the commodity boards and agencies that qualify as critical priority areas in the overall development plans of the government are eligible for funding under the development fund of the PNG LNG Sovereign Wealth Fund.
31. An Agricultural Investment Corporation (AIC) should be established to remedy deficiencies in policy development, existing funding and governance arrangements that would then enable the commodity boards to play a more positive role in policy

implementation, and prudent resource allocation and utilisation in the agriculture sector development.

32. The proposed AIC should be structured to give priority to repair and upgrading of physical infrastructure of commodity boards and agencies, and establishing a contestable grants scheme to meet high priority development needs in agriculture subsectors.
33. The AIC should be capitalised initially from NADP funds, proceeds from SWF and projects currently funded under PIP that are being implemented by commodity boards and agencies. Funding of the AIC should be accorded priority status in subsequent Medium Term Development Plans.

ANNEX 3: Future Trends for Sustainable Cocoa

Over the last decade the importance of social, environmental and economical issues in the cocoa sector has increased considerably. As a consequence, cocoa certification has been placed at the centre of an international debate amongst the cocoa community. As opposed to palm oil where concerns linked to deforestation have been key in developing private sector and government ambitious commitments for deforestation-free palm oil, concerns in the cocoa sector initially focused on the issue of child labour and forced labour in West Africa (Ghana and Ivory Coast, the largest producer). More recently deforestation free cocoa supply chain have also been discussed in country such as Peru and the impact of cocoa production on the rainforest⁵⁴. The demand for sustainable cocoa has been increasing over the years and this trend will continue over the next years. To secure their cocoa supply and answering to public pressure, companies are establishing ambitious goals and implementing programmes to increase their sustainable cocoa procurement. Another important development is the increasing number of multi-stakeholder initiatives to promote sustainable cocoa production (ICCO, 2012).

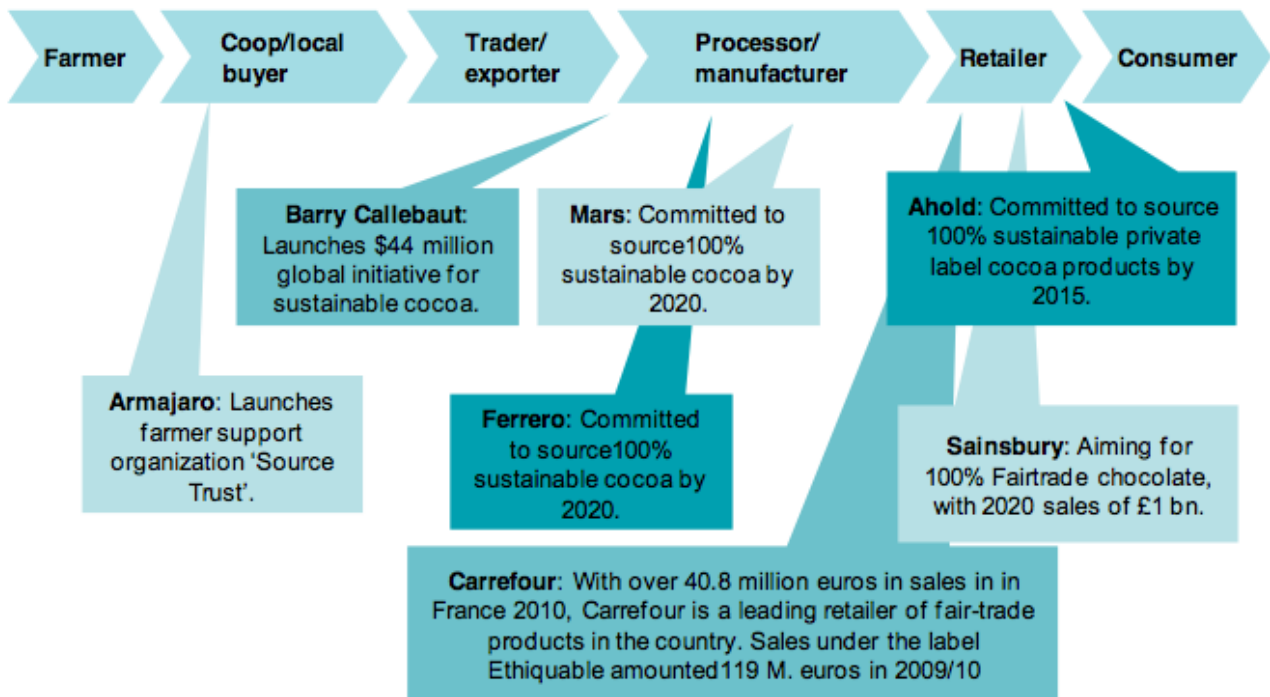
Several governmental initiatives have also emerged over the past decade to request consumer countries to take greater responsibility over the sustainability of their cocoa supply chain. Below is a non- exhaustive list of few of these initiatives:

- The EU announced its concerns and called for its member states responsibility for the sustainability of the cocoa sector, as they are the world's biggest chocolate consumer;
- The Dutch government together with private sector players, NGO's and development organizations signed in 2010 a Letter of Intent where it explicitly announces the objective of having a 100% guaranteed sustainable cocoa consumption in the Netherlands by 2025. The Netherlands is responsible for 25% of all global cocoa processing.⁵⁵ The German government together with members of the private sector, civil society and development cooperation has launched in June 2012 the Sustainable Cocoa Forum, with the objective of increasing the amount of sustainable cocoa produced in countries like Ghana and Côte d'Ivoire and improving the lives of smallholder farmers. The Forum will help to link up initiatives and increase collaboration in the sector. Today, approximately 12,4% of cocoa grown worldwide is consumed in Germany (ICCO 2012).

In addition to government initiatives there are also specific corporate initiatives spread throughout the whole value chain. For instance ambitious commitments are made from the private sector towards the increase of their sustainable cocoa used, with some companies aiming for 100% sustainable cocoa sourced by 2020. A selection of some of these private sector initiatives and commitments is presented below:

54 http://unfccc.int/secretariat/momentum_for_change/items/9254.php

55 <http://www.idhsustainabletrade.com/news/sustainable-cocoa-through-idhunder>



Companies commitments for sustainable cocoa (ICCO, 2012)

One of the results of these commitments is that the demand for certified cocoa is increasing and the private sector is striving to secure their sustainable supply of cocoa. As a consequence of the commitments, private sector actors are establishing strategic partnerships with other players in the value chain, such as processors, NGO's, certification schemes and development agencies in an effort to secure their supply (ICCO, 2012).

ANNEX 4: Indonesia Palm Oil Platform (inPOP)

<http://www.inpop.id>

As the international leader of palm oil production, Indonesia plays an important role in mitigating environmental impacts and ensuring a sustainable product for consumers around the world. In October 2014 the Ministry of Agriculture and its partners launched the Indonesia Palm Oil Platform (InPOP) to coordinate the entire sector and existing initiatives focused on the sustainability of palm oil. The objectives of the platform are:

- To create a multistakeholder national action plan for the long-term sustainability of palm oil;
- To monitor and adapt actions that address the root causes limiting the sustainability of the Indonesian palm oil sector;
- To influence and harmonise government policy that ensures a strong and coherent legal framework for the sustainability of Indonesian palm oil;
- To establish partnerships and coordinate existing actions that forward the sustainability of Indonesian palm oil.

The advantage of a platform such as InPOP is in the multistakeholder dialogue, which strengthens efforts to achieve sustainability by providing the right combination of expertise and analysis to scale-up action in priority areas. Based on their respective responsibilities and expertise, the right set of stakeholders can identify the challenges and “co-create” solutions. *This results in broader ownership, greater trust and understanding between actors, which ultimately leads to the overall adoption of sustainable production and trade of palm oil.* The list of InPOP participants and the key activities of the different Working Groups are presented below.

InPOP Participants:

Government	Ministry of Agriculture Indonesian Sustainable Palm Oil Secretariat (ISPO) Ministry of Environment and Forestry The National Development Planning Agency (Bappenas) The National Land Agency (BPN) Ministry of Cooperatives and SMEs Representatives from local government: Riau, South Sumatra, West Kalimantan
Private Sector	Wilmar International Limited Indonesian Palm Oil Producers Association (GAPKI) Indonesian Chamber of Commerce (KADIN) IKEA Mondelez International Sucofindo Tuv Rheinland PT Astra Agro Lestari Tbk PT Sinar Mas Agro Resources and Technology Tbk (SMART) Asian Agri Group Musim Mas Holdings
Civil Society	Sawit Watch Rainforest Action Network (RAN) Greenpeace World Wildlife Fund (WWF) The Nature Conservancy (TNC) Climate Policy Initiative (CPI) The Roundtable on Sustainable Palm Oil (RSPO) Earth Innovation

	<p>Zoological Society of London (ZSL) Estates Strategic Sustainable Development Forum (FP2SB) Oil Palm Smallholders Union (SPKS) Indonesian Center for Agricultural Land Resources Research and Development (ICALRRD) Center for International Forestry Research (CIFOR) Indonesian Oil Palm Society (MAKSI) Indonesian Palm Oil Board (DMSI) Bogor Agricultural University (IPB) LPP Yogyakarta Polytechnic College</p>
Development Partners	<p>United Nations Development Programme (UNDP) The Roundtable on Sustainable Palm Oil (RSPO) UN Office for REDD+ Coordination in Indonesia (UNORCID) The Sustainable Trade Initiative (IDH) Solidaridad The Japan International Cooperation Agency (JICA) The Netherlands Development Organisation (SNV)</p>

Key Activities of the 4 InPOP Working Groups:

Working Group 1 Increasing Smallholder Capacity	<ul style="list-style-type: none"> • Implement relevant training programs for good agriculture practice (GAP) and better plantation management • Map palm oil smallholder plantations in coordination with the local governments • Provide training and workshops for farmers to implement ISPO standards • Improve the capacity of farmer support groups and unions • Provide seed procurement budgets and the establish microfinancing programs
Working Group 2 Environment Management and Monitoring	<ul style="list-style-type: none"> • Update studies, forest mapping and statistics of land • Promote low-emissions farming • Design and implement a degraded land swap scheme • Streamline and define laws and regulations specifically concerned with high conservation value (HCV) forests • Establish a forest fire aware brigade • Determine good water management guidelines and disperse
Working Group 3 Governance and Mediation	<ul style="list-style-type: none"> • Mediate and provide legal services to empower communities in land ownership disputes • Define clear measurement standards outlining ownership as well as forest boundaries • Synchronise various laws, policies and regulations throughout respective government ministries • Formulate a single definition of forest area according to applicable laws and regulations • Collect data on land ownership of local and migrant communities based on population data • Define and enforce a standard price for fresh fruit bunches (FFB)
Working Group 4:	<ul style="list-style-type: none"> • Swiftly implement ISPO organisational bodies at the provincial, district and city levels • Collaborate with the private sector to promote the use of palm oil as biodiesel • Establish a fair international market price • Create an industry lead campaign to promote sustainable Indonesian palm oil to the world

ANNEX 5: Minutes of Validation Workshop and List of Participants

Managing the Impact to Forests from Commercial Agriculture 31 May 2016 Grand Papua Hotel

OVERVIEW

A stakeholder validation workshop on sustainable agricultural commodities facilitated by the Climate Change Development Authority (CCDA) was held at the Grand Papua Hotel, Port Moresby on 31 May 2016. Assistance was provided by the Forest Carbon Partnership Facility (FCPF) REDD+ Readiness Project, a project of the World Bank and administered by the United Nations Development Program.

Workshop participants included key government agencies such as the Department of Agriculture and Livestock (DAL), Papua New Guinea Forest Authority (PNGFA), Department of Lands and Physical Planning (DLPP), Conservation and Environment Protection Authority (CEPA), Oil Palm Industry Corporation (OPIC), as well as as representatives from civil society organisations, the private sector and development partners. The list of participants is presented below. Due to various reasons, some invitees from the provincial government, the palm oil industry, the Department of National Planning and Monitoring (DNPM), the Department of Prime Minister and National Executive Council (DPM & NEC) and the Constitutional Law Reform commission (CLRC) could not attend the workshop.

Prior to the workshop, agendas, invites and the executive summary of the report were sent out to participants either via email or hand delivered for people to read, understand and make time available to attend. A month earlier, a draft of the report was circulated via email to target groups involved in the study to provide comments. Only few comments were received in advance of the workshop.

The objective of the workshop was to validate the findings of the study on agricultural sustainable commodities commissioned by FCPF and gather expert opinions on the two recommendations proposed by the consultants who undertake the study. This validation process is essential as the policies or measures developed in this study are likely to be integrated into the National REDD+ strategy in the future. The participants validated through group discussions the different recommendations provided in the report and made suggestions on how to improve them.

WORKSHOP PRESENTATIONS

Mr Joe Pokana, the Acting Managing Director of CCDA, officially opened the workshop with remarks on what CCDA is currently doing and what role the government has played on climate change and REDD+ since it first signed the Kyoto protocol in 2008.

Another presentation was later delivered by Mr. Terence Barambi, Acting Manager REDD+ at CCDA regarding the roles and functions of CCDA as a mandated body that handles climate change activities in the country. The progress of REDD+ were highlighted as well as the link between REDD+ and Commercial Agriculture.

The key note speech was delivered by the Secretary of the DAL, Dr Vele Pat Ila'ava on "*Innovative solutions making a real difference in life: Role of innovation and public policy for people prosperity and sustainable rural development*". The presentation focused on the status of agriculture in PNG

today and where do we want to take it in the future. In his speech, the Secretary called for a paradigm shift in order to build a prosperous agricultural sector in the future. The key findings of the report as well as its recommendations were then presented by the two consultants in charge of the study.

3. GROUP DISCUSSIONS

Two groups were formed after the presentations to answer specific questions for each recommendations and validate them. The questions and answers by each group are presented below.

a. Developing a national policy for sustainable palm oil

1. Are there other aspects that you would like to be considered in the proposed groundwork study? (see proposal on information gaps and list of policy options)

The group participants indicated that they agree with the information gaps proposed in the report:

- Comprehensive mapping of all the existing palm oil development in the country
- Mapping of palm oil land suitability in the context of certification
- Cost/benefit analysis

Additional comments were made as follows:

- The need to develop a national land use map
- Land suitability mapping is available at DAL. Tie it with other institutions.
- Redo pricing concept for oil palm and pass a legislation
- Tariff not favorable to agriculture. Need to look at quota
- Connect oil palm to international policy/ agreements – what are the uniform rules and procedures?
- Have a central database that is accessible by all. Currently lack of data and could be challenging
- All sectoral plans must harmonise. Could be addressed through the new land-use policy. Have a Technical working group to inform people of official and working data

For the policy options, the recommendations from the report were also supported. Comments were made as follows:

- DAL is targeting all the sector despite complaints from industry regarding the two new bills;
- Identify high priority areas over non priority areas. Set threshold level. Set rules on slope, land suitability etc. Set up rules or use standards (e.g. safeguards from UNEP, RSPO, etc)
- Need safeguards linking to international standards, charters and conventions before projects are given approval.
- Clause should be included in agreement instruments signed by the state, provincial government and the developer to comply. Agreement to be reviewed every 5 years (oil palm agreement sometimes for 25 years). Financial plans, environmental plans, business plans must be made available by developer. Stop a project to start if criteria are not met
- Need coordination despite rules and regulations are there
- Sector is facing development challenges. Register development areas with DAL. Should have monitors.
- Motivate landowners by providing incentives to watch each other and ongoing development activities that leads to deforestation and degradation.
- Give responsibility to provincial, district and ward to access development funds.

2. What would be the ideal process to follow after the groundwork study to draft and approve such a policy (e.g. in terms of multi-stakeholder consultation, responsibility/leadership, committee to oversee its development, official approval, etc.)?

There was no time to discuss the second question.

b. Establishing PNG's first multi-stakeholder palm oil platform

1. Who should lead the platform from the government and who to participate? Are you generally supportive, unsupportive or undecided about such a platform?

2. Should it be a single (e.g. palm oil only) or multiple commodities platform? What are the pros and cons of each options?

In this group were representatives from DAL, JICA, PNGFA, PLPP, OPIC and EFF. Everyone is supportive of establishing the platform. The following comments have been made

- long overdue
- good to have everyone on board to discuss the issues of the sector
- Government should take the lead and ideally DAL
- the platform could boost the industry in terms of transparency and governance
- Important to see how the platform will fit with the new bills from the government but overall in line with DAL plans to lead and regulate the different commodities
- Important to link with sustainable land-use plans
- risk of being an empty box if necessary steps are not put in place
- Could play the role of consultative group about commercial agriculture
- Could help support control and regulate the establishment of new palm oil development
- Palm oil is a priority and the platform should be established as soon as possible
- Will help establish the necessary link between different departments
- the timing is right and the idea and vision is good – could fit well with government restructuring
- no policy for the sector has been detrimental in the past
- The government does not know what the private sector is doing at the moment as OPIC only have extension services for smallholders
- will help ensure smallholders participation in discussion for the future of the sector
- Important to consider women in agriculture in discussion of the platform.

Most participants indicated an interest to have a multiple commodity platform with the 3 commodities together (Palm Oil, Coffee and Cocoa). However, a number of challenges are associated with this. DAL proposed to start with palm oil as a pilot and then if it works add the 2 other commodities. The decision as to make it single or multiple commodities can be made during the design stage of the platform after assessing with key stakeholders the pros and cons of each option

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